Contemporary International and Domestic Banking Developments and the Emerging Challenges[1]

Dear Friends,

I am delighted to be here this evening at the meeting of the Bankers' Club, Kolkata, which, I understand, is in the process of reactivating itself to provide a vibrant professional platform to the bankers for an ongoing exchange of views on the areas of functional and contemporary relevance to the banking community. I am grateful to the organisers for affording me this opportunity to be with this august audience and to share some my thoughts on the very topical subject of *Contemporary International and Domestic Banking Developments and the Emerging Challenges*. The recent global developments point to a very important systemic dimension which is closely intertwined with the core mandate of the Reserve Bank of India, namely, maintaining monetary and financial stability in the system.

2. As you are aware, the credit markets in the western world have witnessed in the recent past considerable turmoil leading to significant loss of market liquidity. This has had far reaching consequences all around the world and a few major global financial institutions either became insolvent or had to be rescued by the public authorities, at significant cost. Of late, there has been an explosion of literature analysing threadbare the myriad aspects of the global credit market crisis. I would however, like to present a broad overview, from the Indian perspective, of the factors underlying the credit market crisis in the west, the implications of the crisis for the financial sector, lessons learnt from it, the various suggestions made at different fora for pre-empting the recurrence of such events, the Indian regulatory framework for liquidity supervision, and the policy measures instituted by the Reserve Bank in the past few weeks for augmenting liquidity and to safeguard the Indian system.

[1] Speech by Shri V Leeladhar, Deputy Governor, Reserve Bank of India at the Bankers' Club, Kolkata on November 24, 2008.

Factors leading to the sub-prime episode

3. The recent credit market episode is supposed to be the culmination of a variety of unanticipated and unforeseen developments and many common drivers of the crisis have been identified by the academics and analysts. However, taking a holistic perspective, the credit market developments could be viewed to have been triggered by a combination of circumstances, which, in turn, were precipitated by a complex interaction of several variables. Let me briefly enumerate some of them.

The rapid asset growth in the housing mortgage sector in the USA had been fuelled by an ongoing benign interest rate environment, which made the home mortgages affordable to many borrowers, with limited means, for acquiring homes. However, the credit intermediaries did not appear to have factored-in the impact pf potential changes in the macroeconomic / interest-rate environment in their credit assessments of such borrowers and on their repaying capacity. It is reported that the lenders also enticed the home loan borrowers through "teaser rates", which were artificially low interest rates, valid only for a limited initial period.

There was wide-spread adoption of the "originate-to-distribute" model by the credit / banking institutions under which the loans were granted not with the objective of holding till maturity but for securitising them rapidly. Such an approach tended to weaken the incentives of the lenders for ensuring rigorous due diligence at the credit appraisal stage – as they were content in the knowledge that the asset would not remain on their balance sheet for long. This, in turn, led to assumption of significant amount of credit risks by the lenders on low-quality / sub-prime counterparties, and acquisition of low-quality assets, which were subsequently securitised.

The credit intermediaries also resorted to large-scale reliance on credit-risk transfer (CRT) instruments, including securitisation structures, which enabled the hiving off of such exposures to a variety of Special Purpose Vehicles through issuance of securitised paper, mortgaged backed securities and structured finance products. Such risk transfer resulted in the investors in such products getting farther and farther removed from the underlying risks on the borrowers whose loans had been securitised and the investors did not know the real nature of risk and where the risk actually resided.

Also, the ready acceptance of the securitised products by the investors such as hedge funds, asset managers, structured investment vehicles (SIVs) and other specially designed conduits in various segments of the market led to a wide dispersal of the underlying credit risk to a larger investor universe that was not necessarily better equipped than the originating lenders to assess the underlying credit risks.

The provision of liquidity-support commitment by the banks to the structured investment vehicles (SIVs) was yet another factor that exposed the banks to the liquidity risks faced by the SIVs. The SIVs encountered the liquidity squeeze when they could not roll over their short-term funding raised through the Asset-Backed Commercial Paper (ABCP) for financing their long-term assets. This forced the banks, for reasons of reputational risk, to roll-in these off-balance sheet vehicles and their exposures, on to their own balance sheets. This, in turn, resulted in an involuntary and sudden expansion of the balance sheets of the banks – bringing their capital adequacy under severe strain.

4. It would thus appear that the sub-prime lending by the credit intermediaries in the developed world was premised on the assumption of continued benign interest rate environment and an enduring uptrend in the housing prices. This, in turn, was expected to keep increasing the extent of 'equity' of the homeowners in the houses purchased, thus, enabling them to refinance their mortgages at lower interest rates. However, a change in the macroeconomic conditions and the reversal in the interest rate cycle coupled with the moderation in the house prices, belied the assumptions. This strained the borrowers' ability to service their mortgages, leading to large-scale delinquencies. This, in turn, impacted the servicing of the dues on the MBS and other structured finance products, held by a variety of investors.

5. On account of default on the structured securities, the rating agencies had to resort to a large-scale down-gradation of numerous structured finance products. This, in turn, paralysed the new issuances and trading in these papers, eliminating the market liquidity in these instruments. The attempt of some of the large investors in such products, facing redemption pressures and margin calls, to liquidate their portfolio, also sharply depressed the market prices. The drying up of *market liquidity* affected the *funding liquidity* of the SIVs and other conduits, which were unable to roll over / renew

their market funding, raised predominantly through asset-backed commercial paper (ABCP). The conduits, therefore, had to invoke the liquidity lines committed to them by the banks which, in turn, resulted in the banks having to induct these illiquid assets on their balance sheets, as per contractual obligations for providing liquidity. This increased the demand for liquidity from the banks. However, given the uncertainty and the lack of transparency in regard to the level of problem exposures of the counterparty banks, the banks were reluctant to deal with each other in the inter-bank markets and tended to hoard liquidity for their potential future needs. This necessitated significant liquidity injection by some of the major central banks to ease market liquidity, even contrary to their own monetary policy stance.

Implications of the credit market turmoil for the financial sector

6. Recent financial developments have brought to the fore several issues that carry significant implications for the safety and soundness of the financial sector. Allow me to briefly dwell on some of these aspects.

First, there is closer scrutiny of the **business strategies** of banks and financial institutions which are based on the model of 'originate and distribute'.

Second, issues relating to **securitisation** are being debated in the context of incentive structures that encourage economising on capital requirements and enhancement of off-balance sheet exposures of banks relative to the considerations of their safety and soundness.

Third, recent events have also underscored the need for enhanced market **transparency** relating to disclosures of off-balance sheet exposures of banks, particularly with regard to their liquidity commitments to conduits, valuations of structured credit products dealt by them, and the like.

Fourth, the apparent inadequacy of financial institutions' capital cushions has been exposed. In this context, the **role of sovereign wealth funds** as providers of capital is being carefully assessed by supervisory authorities across the world.

Fifth, the sharp re-pricing of risks that began in the middle of 2007 has raised issues relating to the **fair value accounting** and marking-to-market of portfolios of financial institutions and the attendant issues relating to capital provision.

Sixth, there are concerns that existing risk pricing and **risk management tools** and techniques employed in banks and financial institutions are inadequate in relation to the risks evolving in the financial markets.

Seventh, there is a progressive blurring of the boundaries between **liquidity and solvency stress** faced by the banks in situations of generalised uncertainty in the markets and the loss of confidence amongst financial entities.

Eighth, the **role of structured investment vehicles** (SIVs), the potential liquidity demands that could crystallise on the balance sheets of the sponsoring banks and the degree of leverage embedded in the global financial system has been largely underestimated – which has implications for the soundness and efficiency of the financial sector as a whole.

Finally, the functioning of the **credit rating agencies**, role conflict in their operations and excessive reliance on the credit ratings even by the institutional investors, are under scrutiny.

Lessons from Sub-prime crisis

7. While India has been relatively insulated from the impact of the credit market turmoil, the sub-prime episode, in retrospect, provides several useful lessons for the banks as also for the banking supervisors all over the world. Allow me to briefly touch upon some of the major lessons emanating from the episode.

Underwriting standards

The episode has once again brought to the fore the imperative of observing prudent underwriting standards by the credit intermediaries. The traditional banking tools such as the loan to value ratio, debt service ratio (particularly, after the initial “teaser rates” came to an end), purpose of the loan, verification of documentary evidence of income and assets of the borrowers, and ongoing monitoring of the borrowers’ affairs have demonstrated their continued relevance, despite rapid advancements in

the financial technology and products. It is important to note that the products created through sophisticated financial engineering may not be sustainable over the long term if their building blocks are not underpinned by rigorous underwriting standards.

Risk transfer

The risk transfer by adoption of “originate-to-distribute” models by the credit intermediaries needs closer supervisory attention. The episode has demonstrated that there was insufficient understanding of how complex structured products work, the nature of the risks to which the investors were actually exposed, and, in the case of risk transfer through securitisation, etc., where the risk ultimately resided, and indeed, whether any risk has really been transferred from the originators.

Liquidity Risk

There had been an insufficient recognition on the part of supervisors and banks of the close link between *market liquidity* (ability to rapidly sell assets without impacting prices) and an individual bank’s *funding liquidity* (ability to raise funds from the market). The recent credit turmoil has highlighted the importance, for both banks and supervisors, of considering market disruption scenarios as well as institution-specific scenarios in liquidity planning. This should also encompass the liquidity demands arising from off-balance sheet commitments, implicit or explicit, of the credit intermediaries. Also, the assumptions underlying the liquidity contingency plans need to be realistic and not overly optimistic.

Valuation

The recent market turmoil and resulting illiquidity has highlighted the importance of reliable valuations and transparency of risk exposures. Some banks seemed to have used inappropriately optimistic valuation and modelling methodologies to determine the value of certain securitisation exposures, such as collateralised debt obligations (CDOs) and residual interests. It has been demonstrated that liberal and unsubstantiated valuation assumptions can result in material inaccuracies in financial statements and substantial write-downs of structured products, and in case of excessive concentration, even demise of the sponsoring institution. Supervisors and banks, therefore, need to understand the potentially significant effect that market volatility on the financials of a bank.

Residual risks in structured products

There was insufficient recognition of residual risks in the structured products on the part of investing banks, as well as those banks acting as issuers and sponsors of asset-backed commercial paper (ABCP) programmes. For instance, banks that extended liquidity facilities to ABCP programmes were exposed to high degrees of credit risk, of the underlying asset pool, which may be subtly embedded within the liquidity facilities' provisions. Securitisation exposures can also expose banks to significant reputational risks, as observed in the recent episode, on account of which the banks had to roll-in the SIVs on to their own balance sheets. Supervisors and banks, therefore, need to take cognisance of the residual risks entailed in structured products.

Transparency and Disclosure

The recent difficulties experienced by banks as well as investors, with respect to complex structured products highlighted the lack of transparency due to insufficient disclosure. Much of the current turmoil in the credit markets related to questions about the soundness of certain types of collateralised debt obligations (CDOs) and asset-backed commercial paper. These problems might perhaps been avoided, or at least mitigated, through greater transparency, particularly with respect to the exposures of some large international institutions to CDOs of securities backed by sub-prime mortgages originated in the United States.

Regulatory Scope

In view of ever-increasing integration of different segments of the financial market, the potential of the unregulated market participants for infecting the regulated parts of the system, no matter how well supervised, needs better recognition by the financial supervisors. The regulatory gaps in which the unregulated entities operate need to be identified and effectively addressed so that the systemically-important regulated entities are not put to undue risk by the activities of the unregulated entities, entailing significant public cost.

Employee-compensation structure

The remuneration structure of the employees is also stated to have played a role in the recent crisis. The pay structure was flawed in as much as the employee bonuses formed a large part of the entire remuneration package. The performance-based remuneration did induce risky behavior in the investment managers of the major global financial entities. The compensation structure was also reportedly front-loaded in many cases and the compensation systems rewarded very short-term employee performance instead of reckoning the long-term effect of their actions. Moreover, when things went wrong, there was little penalty, except maybe the loss of a job – often with millions of dollars in compensation. Thus, the distorting impact of the design of compensation structure on the incentive framework of the employees needs to be clearly recognised by the banks as also the supervisors.

Conflict of interest in the role of rating agencies

It is well known that the rating agencies are paid for their rating exercise by the issuers of securities and not by the investors in those securities. There were instances where the rating agencies, while rating of securities, also tendered advice on the structuring of those securities so as to be able to improve their rating. Such structured obligations were then assigned a rating. Thus, their role of providing to the investors an objective and independent assessment of the risks entailed in the securities rated by them, took a back seat while their primary loyalty lay with the issuers of securities. Moreover, the dual role of the rating agencies in structuring as well as rating of securities also created a conflict of interest in their functioning.

Remedial and pre-emptive measures suggested for future

8. In this background, a variety of suggestions have emerged from different quarters to obviate the recurrence of such episodes in future. Several strands of broad policy measures have been suggested from time to time towards this goal. The reports of the International Institute of Finance and the Financial Stability Forum are particularly notable in this regard. The suggestions made so far include ensuring a greater emphasis on improving the market transparency through better market governance and securing full accountability of the market players for adverse market developments. Permit me to briefly enumerate some of the salient suggestions that have been made in this regard.

9. As the institutions that generate and grant loans with the intention of subsequently hiving them off in the market, have less incentive to control credit risk than a traditional bank, which keeps loans on their balance sheet till full repayment, it has been suggested that the regulatory framework for them should be reviewed and strengthened. In other words, the banks adopting "**originate-to-distribute**" model should receive **closer regulatory oversight**.

10. The **rating agencies** play a vital role in the process of securitisation, through rating the paper issued by the SPVs. It has therefore been suggested that (a) appropriate mechanisms should be evolved to ensure that the information received by the rating agencies is reliable; (b) appropriate rules-based structures should be established to particularly prevent the conflicts of interest in their functioning; (c) a closer attention to the liquidity risks faced by the rated entity / product should be mandated for the rating agencies in their rating process; and (d) an appropriate road map for the rating agency reforms, should be evolved to address the weaknesses revealed as also to promote competition in the rating industry.

11. As the investors in the securitised paper were apparently unaware of the true quality of the underlying loans, suggestions have been made to improve the transparency of securitisation transactions as also of the characteristics of the underlying loans. Mandating a certain degree of standardisation of the securitisation transactions, packages and of the reporting requirements has also been suggested to improve transparency.

12. As I mentioned, one of the causes for the banks' distress was the invocation of liquidity support lines by the SIVs sponsored by the banks. Since unlike the Basel I Framework, the Basel II framework does require a capital charge for such liquidity support provided by the banks, accelerating and encouraging the implementation of Basel II in all jurisdictions has also been suggested.

13. The financial innovation has transformed the contours of liquidity risks on account of the general trend toward the “marketisation” of assets through various securitisation structures, Since the imposition of additional regulatory capital charge alone can not be an answer to the liquidity problems faced by the banks, efficient and effective management of liquidity by the banks has acquired crucial significance. Hence, suggestions were made for modernising and upgrading international norms for liquidity management, with greater emphasis on simulation, scenario analysis and stress testing of the liquidity needs. The Basel Committee on Banking Supervision has since published the *Principles for Sound Liquidity Risk Management and Supervision,* in June 2008, which provide a good starting point.

14. With progressive marketisation of banking assets, the current accounting standards also increasingly rely on the “mark to market” valuation of financial assets. However, the need for a more cautious approach has been highlighted in relying upon such valuations since the recent upheavals seem to have cast a doubt over the reliability of this model when markets are quite thin and shallow, not to mention short-lived. While the essential information value embedded in the market prices is beyond dispute, it is necessary to recognise that in stressful times, such market-based valuations could prove quite illusory due to market illiquidity.

15. In the wake of the sponsor / parent banks being forced to bail out their SIVs, due to reputational risk, the legal independence of such SIVs for regulatory and accounting purposes has come into question. Hence, a **review of the boundaries of consolidated supervision** has been suggested. This would require a re-assessment as to whether the accounting boundaries between the parent and its off-balance sheet affiliates correctly reflect the risks to which the parent entity remains exposed.

16. A certain class of unregulated entities in the financial sector had also been instrumental in the recent credit crisis. A careful examination of the modalities for periodical **review of the regulatory structure** for the financial sector, in different jurisdictions, has therefore been suggested so as to ensure, through appropriate intervention, that none of the market players “fall between the cracks” and remain unregulated in the regulatory dispensation in any jurisdiction.

The Indian scenario

17. With rapidly increasing financial globalisation, it is difficult to assume that a country can remain totally insulated from the fallout of global turmoil of this dimension, though the degree of impact could certainly vary as per the county-specific conditions. Thus, India too was exposed to the impact of this global crisis though to a much lesser extent. A detailed study undertaken by the RBI recently in regard to the impact of the sub-prime episode on the select banks had revealed that none of them had any direct exposure to the sub-prime markets in the USA or other markets. However, a few Indian banks had invested in the collateralised debt obligations (CDOs) / bonds which had a few underlying entities with sub-prime exposures. Thus, no direct impact on account of *direct exposure* to the sub-prime market was in evidence though a few of these banks had to record the mark-to-market losses caused by the widening of the credit spreads due to adverse impact of the sub-prime episode on the term liquidity in the market.

Measures taken by the RBI

18. The RBI has taken several measures over the years for strengthening the risk management systems in the banking sector and wide-ranging measures at the systemic level in the recent past in the light of the global and domestic developments. Let me make a brief mention of some of these.

Risk Management in banks

19. The management of liquidity risk by the market participants has emerged as a very crucial factor in the recent crisis. The RBI has been alive to the importance of liquidity risk management in the Indian banking system. We had issued the guidelines on Asset-Liability Management (ALM) system to the banks as far back as in February, 1999, which stipulated a simple maturity ladder approach to the ALM along with certain regulatory gap limits for negative mismatches in the first two time buckets. In October, 2007, we modified the guidelines with a view to adopt a more granular approach to measurement of liquidity risk. In terms of the revised guidelines, the banks are required to capture liquidity risk in time buckets consisting of the next one day, the next 2 – 7 days, the next 8-14 days and so on. Banks have been urged to make concerted efforts to capture 100 per cent data, including off-balance sheet items, from all their branches in a timely manner. While the banks are required to

prepare the 'Statement of Structural Liquidity' on a daily basis for their MIS, for monitoring by the RBI, the statement needs to be sent to the RBI at monthly intervals.

20. Besides the ALM Guidelines, RBI has also issued the Guidance Notes to the banks on management of credit risk, market risk and operational risk. The banks are also required to adopt formal risk management architecture for effective management of different types of risks, with appropriate high-level risk management committees guiding the risk management function in the banks. Such a holistic risk management architecture coupled with the inculcation of a robust risk management culture in the banks is expected to adequately address the risk management imperatives in the Indian context.

Management of systemic liquidity

21. On account of liquidity crunch in the western world, there has been wide-ranging de-leveraging in evidence as the global investors were constrained to liquidate their investments in the financial markets. This has also resulted in significant FII divestments in the Indian equity markets and the capital outflows from India. This, in turn, impacted the systemic liquidity and also exerted pressure on the exchange rate of the rupee. The RBI intervention in the forex markets also added to the pressures on the rupee liquidity. In this background, the RBI initiated a variety of policy measures to infuse liquidity into the system to enable the uninterrupted flow of credit to the productive sectors of the economy.

22. The RBI has acted pro-actively and promptly and taken multi-directional measures to infuse liquidity into the Indian system so as to ensure availability of credit to the productive sectors of the economy and thereby, maintaining financial stability. While the package of measures has had some positive effect, the challenges still remain as the global uncertainties continue to persist. The Reserve Bank will continue to closely monitor the developments in the global and domestic financial markets and will take swift and effective action as appropriate. The bankers too, on their part, mindful of the needs of their customers, have recently reduced their lending rates and it is expected to have a salutary effect on the credit off take in the system.

Conclusion

23. These are challenging times for all of us and we need to be watchful of the unfolding developments. While the temporary counter-cyclical measures taken by the RBI are as per the need of the hour, it has to be borne in mind that the measures are *ad hoc* in nature in response to a particular situation. The banks would, therefore be well advised to ensure that their business strategies and decisions are guided by the longer-term perspective of the systemic and macroeconomic developments and are not unduly influenced by the current episode of the exceptional events. Since the banks would have a key role in successfully countering the adverse impact of the recent developments, their continued safety & soundness and financial health would be of utmost importance – for the banks, for their customers as well as for the public policy authorities from a systemic perspective. I am sure, the banking community would rise to the occasion and measure equal to the task in effectively responding to the challenges ahead, through prompt action underpinned by robust pragmatism.

24. I wish the reactivated Bankers Club of Kolkata become a vibrant platform for exchange of information and will come out with innovative ideas for taking safe banking to every nook and corner of the country.

Thank you for the attention.