

## Centrality of banks in the financial system

Shyamala Gopinath<sup>1</sup>

1. I am delighted to be present here amongst you all on the occasion of the 12th Annual Conference of FIMMDA-PDAI. These conferences have over the years assumed importance in not just bringing the participants together to tally notes and network but to take a pause and reflect over the issues arising out of fast changing times.
2. I see from the agenda for the conference that the focus is on the emerging post-crisis regulatory landscape for the financial sector – Basel III framework for banks, OTC derivative markets etc. There has been quite some progress internationally in repairing the financial system – strengthening the regulation of institutions – banks/non-banks – and markets as well as the support framework.
3. But increasingly, the central role of banks in the entire network enmeshed through the financial system is coming out much sharper. Even in market-based financial systems, which were supposed to contribute to disintermediation of the role of banks in a big way, the vital support functions being performed by banks came out clearly during the crisis. The recent crisis was, as much as other things, about the centrality of banks as the supporting lifelines of financial markets. There is a clear recognition of the inadequacies of the regulatory approach based on the assumption of self-contained, well functioning markets which ignored the risks these markets passed on to the banking system.
4. There is a rich literature on comparative benefits of bank-based versus market based financial systems. The bank-based view highlights the positive role of banks in leveraging informational advantage about the firms for capital allocation and ensuring better credit discipline. In contrast, the market-based view highlights the growth enhancing role of well-functioning markets in fostering greater innovation; enhancing greater market discipline and corporate governance. Market based systems were supposed to reduce the problem of moral hazard inherent in bank-based systems. However, it is increasingly being recognized that any system is essentially an interplay of dynamic interaction between banks and markets and right interpretation of this interplay would be critical for addressing systemic stability.
5. In my address today I intend to focus on this intriguing interface between banks and financial markets which has undergone a fundamental shift in the recent times - banks have become intricately linked to financial markets and hence more susceptible to strains in financial markets; at the same time, functioning of markets has become intricately linked to banks which then emerge as the receptacle for most of risks within the financial markets.

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## **Banks getting linked to capital markets**

6. Banks' increasing interdependence on the capital markets was largely driven by the gradual blurring of lines between commercial banking and investment banking in developed markets. Adoption of the universal banking model and the repeal of the Glass-Steagall Act in the US largely settled the debate at the time. The transition had a significant impact on the balance sheet profiles of banks which became more exposed to market forces and the incentive frameworks clearly worked to favour this.

### *Assets*

7. Increased recourse to 'originate and distribute' model of asset creation and increased reliance on wholesale, market funding of balance sheets were two most evident signs of this shifting paradigm and which also contributed significantly to the intensification of the global crisis.
8. The 'originate and distribute' model was at the heart of complex securitization and credit derivative structures that accentuated the crisis. The underlying incentive at work behind the engineered supply of highly rated instruments was the regulatory framework for capital adequacy. The instruments of financial engineering had provided a simple mechanism to convert a portfolio of loans originated by the entity into tranching securities with differential ratings. There seemed to be an insatiable demand for highly rated instruments and the underlying nature and risks of the instruments were not important as long as the rating agencies assigned the required ratings. The ironical feature was that most of these structured high-quality securities were held within the banking system itself as for banks, investing in these securities was much more optimal from the capital perspective than holding on to the loans originated by them. It was a reverse maturity transformation in action on the asset side – long term assets getting re-transformed into shorter duration market-linked instruments.
9. At a more fundamental level, the above trend was supported by the conception of treating financial risks as commoditised products which can be transferred and traded in the market. From this perspective, all that should matter is the ultimate risk exposure and not the nature of the underlying transaction. Originating loans was, thus, treated on par with taking on credit exposure through purchase of bonds or even writing of credit protection through credit default swaps. The adverse incentives such an approach induced in banks' behavior and its impact on the stability of the financial system are still to be fully appreciated in the regulatory frameworks.

### *Liabilities*

10. On the liability side, a similar transformation was evident from reliance on low-cost, durable retail deposits to short term, wholesale, market linked funding. Financial institutions worldwide increasingly started relying on wholesale funding to supplement demand deposits as a source of funds, becoming, therefore, vulnerable to a sudden dry up of these sources of funds. The deep and liquid global inter-bank markets were supposed to have mitigated the requirement and need for costly stored-liquidity. More than that, there was the benefit of leveraged liquidity – the repo markets provided a mechanism for banks to use/re-use liquid, high quality securities to raise requisite funding.

11. Unregulated repo markets, resembling a fractional reserve banking model with similar multiplier effect, emerged as one of the weakest points escalating the crisis. Banks' were relying heavily on the wholesale market funding through repo markets. During the crisis, however, there were sharp contractions in available market liquidity, which have been explained based on the interaction between margin calls and market liquidity, the cyclicity of leverage. In fact, although the ongoing crisis was initially dubbed the "subprime crisis" some authors have started to refer to it as the "liquidity crunch of 2007-2008" (Brunnermeier, 2009).
12. Another problem with the repo markets was that a substantial part of 'good assets' of the banks got utilized as collateral for short term borrowings. This raises serious issues as far as the interest of depositors and other unsecured creditors are concerned – in times of crisis the available assets backing them would be greatly reduced. What incentivized this framework was a supposedly market-friendly provision in the US laws which gave the repo contracts an exemption from the bankruptcy proceedings.

#### *Capital*

13. The above transformations on the asset and liability sides were extremely capital-efficient. These made possible for banks to have a greater balance sheet size on a smaller capital base. More so, the very capital held by the banks became linked to market demands. Increasingly the Basle norms have permitted quasi-equity, subordinated debt instruments to be held and counted as capital for capital adequacy purposes. Such instruments, pre-crisis, constituted almost 75 per cent of the total capital held by banks in developed countries. These were essentially capital market instruments with some optionalities attached to them.

#### *Income composition*

14. The overall balance sheet transformation was clearly evident in the increased reliance on nontraditional business activities that generated fee income, trading revenue, and other types of noninterest income. A significant proportion of bank revenues came from such activities and there was a view that this diversification of income streams was healthier for bank profits. Consequently, there was conscious shift towards larger proprietary books and greater investment in "owning, investing in and sponsoring" hedge funds and private equity ventures. Banks were effectively working as leverage-providing conduits for hedge funds and like entities which ran huge positions across all markets.
15. There was an entire set of market microstructure which facilitated the above transition – the rating agencies, accounting standards, legal documentation practices. The role of rating agencies was particularly critical as they, blessed by the regulators, provided the requisite comfort and legitimacy to riskier instruments and enabled deployment of a substantial chunk of institutional funds into such securities. The accounting standards, while aiming at reflecting the 'true and fair' picture of the balance sheets, made the balance sheets much more procyclical and market skewed. The legal documentation, particularly related to bilateral contracts on the OTC markets, by reinforcing the collateralization discipline, also exposed the entities to contagion effect from extraneous

developments. Additional margin calls and liquidation of securities kept as collaterals added to the negative feedback loop.

16. The end result of the banks' increasing reliance on capital markets and capital market intermediaries was an explosion in the total size of financial markets. Based on the leverage provided by bank balance sheets, the market volumes and liquidity increased tremendously. This trend also put the banks at the centre of the entire financial market. A slightest problem with these banks and the entire financial system could come unstuck – this is what precisely happened during the crisis.
17. The next section deals with the numerous implicit support systems provided by banks for a well-functioning capital market.

### **Capital markets' linkage with banks**

18. Market based financial systems were supposed to have reduced the dependence of the financial system on banks. However, with increased market-orientation of bank balance sheets, banks emerged as the proverbial guerilla in the room. Their presence was everywhere, implicit or explicit - as providers of liquidity and leverage, as market makers, as repositories of credit risk, as support for other market intermediaries – this was particularly true of non-equity markets. As major market participants, it is the banks which create and enhance market liquidity by virtue of their participation without which it would be difficult to envisage the success of markets.
19. For any market to gather huge volumes and carry out its function of enabling efficient price discovery, the critical factor is the presence of entities with deep pockets which can act as market makers and provide necessary funding support when required. Banks running large proprietary books with the backing of huge balance sheets carry out this function in the institutional markets. Banks remain the ultimate warehouses of liquidity and provide easy and convenient access to liquidity in times of need. In this role banks also expose themselves to considerable liquidity risks in their roles as liquidity providers and as conduits for flow of funds in a market based system. The more developed the markets are, the more are the requirements for such liquidity providers. Capital markets continue to depend upon banks as providers of liquidity and the success of the market greatly depends upon the extent to which banks are able to fulfil such requirements.
20. Efficient markets are based on the assumption that the participants can borrow and lend unlimited quantities of funds. While in practice that is not completely true, banks do provide funds to various market participants enabling them to trade. Such a facilitation of leverage helps the markets in achieving their optimal efficiency. However, in their role as providers of such funds to entities involved in leverage, banks expose themselves to significant credit risks, since any wrong decision by the leveraged participant results in a loss not only to him but also in potential loss to the lending bank. Banks' lending activity and the concomitant credit risks are only increasing with the increase in the financial market activity, indicating the growing reliance of markets on banks. In the process of providing leverage, banks themselves can become highly leveraged which may result in systemic risk for markets.

21. The off-balance sheet support by banks to the SIVs emerged as one of the critical, unrecognised linkages which were responsible for the crisis. As it turned out, the SIVs were involved in proxy-maturity transformation on behalf of banks. They were investing in long-term asset backed securities and other tranching instruments and funding themselves through short term commercial paper market with banks being the major investors. The implicit liquidity support provided to banks was nowhere recognized on the bank books and as the crisis unfolded, many such SIVs came under stress, it were the bank balance sheets which got directly impacted.
22. It is now very evident that non-bank market participants are in general cautious about taking on credit risk. It is either the banks or some sovereign supported entities which, as credit support providers in the form of guarantees, letters of comfort etc. take on the credit risk.
23. Even the CCPs, which guarantee market transactions and assume counterparty risks through novation, ultimately depend on banks to for the settlement guarantee funds. In many cases, even the margins to be kept by the participants with the CCP are in the form of bank guarantees. Banks not only provide Line of Credit (LoC) and Securities Lines of Credit (SLoC) for the participants in the CCP mechanism but also expose themselves, as owners of CCPs, to residual risks of CCP in the waterfall structure of default settlement mechanism. Despite the advancements in market infrastructure leading to development of markets, the dependence of market on banks continue to exist.

#### **What has happened post-crisis?**

24. Many of the above issues came out very clearly during the crisis and are being sought to be addressed.
25. There is now a generally accepted consensus on improving the quality of capital of banks and the new Basel norms prescribe a higher portion of pure equity. There are also proposals for a new form of instruments - contingent capital - which would be nothing but a convertible debt security that would automatically convert into equity as the institution's financial condition weakened. This mandatory conversion feature means that the debt security would not default and thus bankruptcy would be avoided. In essence, a pre-planned contract replaces the bankruptcy process and gives greater certainty. The key criticism against this proposal, apart from the interest among the investor community, is that it does not address the adverse incentive of risk taking on part of shareholders. There is also need to ensure that the equity holders bear the loss and the hierarchy of subordination is maintained.
26. The new Basel norms for trading book, finalised in July 2009, attempted to improve the management of risks in bank trading books, as well as enhance the treatment of risk concentrations, off-balance-sheet exposures and securitisations. Central to the proposals was the introduction of an Incremental Capital Charge (IRC) for trading book risks,

which will supplement the existing value-at-risk modelling framework and introduction of a stressed VAR requirement, using historical data from a one-year period of significant losses. Securitisation exposures have been made subject to a much stringent banking book charge based on credit ratings, and the specific risk capital changes for securitisation and re-securitisation have been enhanced.

27. In the US, the comprehensive Dodd-Frank Act has been enacted which addresses, among others, the issue of separation of proprietary trading from banks – the Volcker rule. The Act contains a diluted version of the original Volcker proposal, which will restrict banks' proprietary trading<sup>2</sup>, impose additional capital requirements on shadow banks engaged in proprietary trading, and restrict banks' ownership stakes in hedge funds and private equity funds. Banks are allowed to own or sponsor hedge funds and private equity funds and even to invest in them as long as their holdings didn't account for more than 3 percent of the bank's capital or 3 percent of the fund's capital.
28. There have been concerted attempts at addressing the adverse incentives available to senior, secured creditors of banks. It is being accepted, much to the chargin of markets, that investments in market-based instruments such as bonds do not imply complete protection in default cases. 'Bail-in' provisions, which would require the senior bondholders to write-down the value of their investments *albeit* after the equity holders have taken the losses, are being discussed as viable options.
29. In regard to addressing concentration of risk in the CCPs, work presently being undertaken by FSB and BCBS include proposals for capital requirement on banks for contribution to default guarantee funds maintained by CCPs based on the amount of initial margin posted with the clearing house and its own financial resources. It is being argued that capital benefit to market participants should be provided only for the transactions settled through those CCPs which are fully compliant with the principles enunciated by CPSS and IOSCO. The exposure to non-compliant CCPs would attract higher capital charge.

### **Indian context**

30. In India, the bank balance sheets are relatively less aligned with capital market – both on the asset side as well as liability side. Capital in the form of subordinated debt and other non-equity instruments constitutes only around 38 per cent of total capital. Issuance of such instruments is restricted by the limit on non-equity elements of regulatory capital. The investments in such instruments by other banks and FIs is constrained by aggregate limit on cross holdings between banks and FIs (10% of investing bank's/FI's total

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<sup>2</sup> Proprietary trading is broadly defined as engaging as a principal for the trading account of the banking entity or nonbank financial company supervised by the Board in any transaction to purchase or sell, or otherwise acquire or dispose of, any security, any derivative, any contract of sale of a commodity for future delivery, any option on any such security, derivative, or contract, or any other security or financial instrument that the appropriate Federal banking agencies, the [SEC], and the [CFTC] may...determine

capital). This limit is aimed at reducing the interconnectedness among the financial institutions. It also ensures that the capital in the banking system comes primarily from outside the banking system. Even though preference shares have been added to the list of eligible capital instruments, there have hardly been any issuances in the market.

31. There are prudential limits on banks' reliance on short-term funding markets. The overnight unsecured market for funds is restricted only to banks and primary dealers (PD) and for these too there are limits on both lending as well as borrowing. Inter-bank liabilities in all forms for any bank have to be within 200 percent of its networth. There are collateralised segments such as market repo and CBLO but access to these is contingent on the availability of securities, which is floored by the SLR requirements, currently 24 percent.
32. On the asset side, fundamental guiding principles, as far as banks' investment activities is concerned, have been:
  - (i) *Nature of different credit exposures is different and all exposures cannot be treated on par.* The regulatory prescriptions have not recognised the concept of 'risk as a fungible commodity' and the fundamental distinction between banks taking credit exposure through giving loans and investing in bonds has not been lost. There are stipulations capping banks' investments in corporate bonds, particularly unrated bonds which are nothing but proxy-loans. Recently, a limited relaxation from these norms has been permitted in the case of bonds issued by companies engaged in infrastructure development.
  - (ii) *Underlying intent and spirit of a particular transaction is more relevant than the form.* Illustratively, the legal framework in India recognises repo transactions as lending and borrowing and RBI has issued accounting guidelines to reflect the substance of these transactions.
  - (iii) *Contamination risks arising from off-balance sheet activities need to be contained.* The off-balance sheet activities of Indian banks consist mainly of sponsoring of MFs and venture capital funds. There are reputational concerns regarding banks' excessive involvement in mutual and venture capital funds. Such concerns mainly emanate from the use of bank's name by all the entities sponsored by it. Such association extends the perimeter of the parent bank's support to the sponsored entities much beyond the obligations defined by the share holding or voting power. While such concerns can be mitigated to some extent by holding additional capital using some sort of proxy, the effective containment of such risks rests only in limiting such activities.
33. I must however admit that it is impossible to have a straightjacket framework and in the recent past, there have been many instances which have tested the scope and nature of banks' involvement with market-based systems.

- *Corporate bond market:* The interplay between bank based and market based models has been very prominent in the case of corporate finance. Traditionally, the financing needs of the corporates were met by banks in the form of loans, cash credits etc. With the development of financial markets, it was generally believed that migrating to market based model and the resultant disintermediation would enable higher allocative efficiency of capital and enlarge the base of lenders. But international experience largely shows that while all most all developed markets have corporate bond markets, relatively few are regarded as large or active. In India too, inspite of persistent policy focus, this is one area where the outcomes have been less than satisfactory. The intractable issues pertain to the structural elements relating to the lack of appetite for credit risk among non-bank institutional investors. The issuances have therefore been largely restricted to financial institutions and public sector entities.

A case has been sought to be built in favour of allowing banks to guarantee bonds. While this may increase attractiveness in the short run but the underlying objective of de-risking the bank balance sheets will not be met. Further, this would hamper with the process of true price discovery for credit risk in the market through corporate bonds.

The critical need for an explicit bank support even a partial credit enhancement came out during our interactions with market participants on issues plaguing corporate bond market – surprisingly nobody referred to CDS as being an answer.

- *Securitisation:* Much of the adverse incentives related to ‘originate and distribute’ model were addressed in the 2006 guidelines which primarily reinforced the true sale characteristic of the transaction and disallowed booking of profit on securitisation upfront. However, much of the securitisation market has since moved to single loan securitisations. While there is nothing inherently wrong in such transactions, these securitisations may not be sustainable as these are confined to particular class of loans and dependant on a particular class of investors, and hence, do not benefit from any diversification of risk. Another trend is the direct assignment of loans to the investors without any securitisation. Such transactions are similar to securitisation in substance and there should not be any difference in the application of the prudential norms.

RBI is in the process of finalisation of the guidelines which, apart from aligning the prudential norms for securitisation and direct sales, also include guidance on minimum retention requirement (MRR) and minimum holding period (MHP). A critical issue in this context relates to the impact on short-tenor loans - some market participants feel that the proposal to have MHP of 9 months would practically take the short term loans out of the purview of securitisation. However, encouraging securitisation of short-term loans may only accentuate the adverse incentives that are sought to be addressed.

- *Issuance of Irrevocable Payment Commitments by banks to stock exchanges:* The issue of banks undertaking custodian services issuing Irrevocable Payment



Commitment to exchanges on behalf of Mutual Funds/FIIs has been engaging our attention for some time. These IPCs were in the nature of non-fund based credit facility but were not being included for computation of Capital Market Exposure (CME).

After giving multiple extensions to banks in this regard, it was recently decided that the potential risk on T+1 would be reckoned at 50% of the settlement amount. Also this amount would be reckoned as CME at the end of T+1 if margin payment / early pay in does not come in. IPC would also be reckoned for the purpose of capital adequacy.

- *Issue of structured forex derivatives by banks:* In view of the huge losses booked by many corporate on structured forex derivatives sold by banks, it was decided to revisit the regulatory stipulations in this regard. Initially it was proposed that no cost-reduction structures would be permitted. However, we received a lot of representations from the corporate sector about the usefulness of some of these structures in risk management. After detailed, protracted consultations with all stakeholders, it has recently been decided to permit certain un-leveraged, non-exotic structures only for large corporates with minimum net worth of Rs 100 crores and following accounting and disclosure norms as stipulated under AS 30 and AS 32.
- *Introduction of CDS:* The overarching argument for introduction of CDS is that it enables stripping and trading of credit risk and it eventually helps in diversifying the credit risk inherent in banks' balance sheets. While ideally it would make sense to start with an enlarged pool of protection sellers, the regulators concerned may not be comfortable in allowing their regulated entities to write credit protection. So, to begin with, the only natural protection sellers and effective market makers may again be banks and NBFCs.

In spite of the basic economic rationale behind CDS, it has been subject to many criticisms internationally, in particular the adversarial incentives it provides to the protection sellers *vis-a-vis* the underlying entity on whom the CDS is written. Our endeavour is to facilitate introduction of CDS while trying to address the concerns. Only covered CDS buying is envisaged and loans have been kept out of the eligible underlying obligations. Restructuring is not envisaged as a recognised 'credit event'. It would be critical for the real sector to see the value in this product while being cognizant of the dynamics of the product and its potential impact on the corporates whose bonds would be the underlying credit.

### **Conclusion**

34. It is clearly evident that the migration to a market based model, from the conventional bank based model where banks used to play a very critical role in intermediation, has not diminished the importance of banks in the financial system. In fact, with higher growth in the financial markets, the responsibilities cast on the banks are on the increase. Therefore, it would be a fallacy to assume that with the migration to a market based model, banks' role in the financial system and therefore, the need for regulatory focus is

less than critical. Rather, I would say, the regulatory challenges have grown manifold due to this new evolving relation between banks and financial markets.

35. It will be imperative for any regulatory framework to recognise this close inter-linkage and frame the regulations accordingly. The critical focus area, as part of the emerging macro-prudential and systemic risk frameworks, would have to be identification of where the risks lie.
36. Let me conclude by underlining some of the broad issues that would need to be addressed in the Indian context going forward:
  - a. *How to strengthen capital requirements for market risk when most banks are on Standardised Approach?* The Basel III regulatory initiatives under Market Risk are largely focussed on the Internal Model based approach. Banks in India are currently on the standardised approach and in any case, most of the banks would continue to remain under the standardised approach. There is, therefore, a need to address the upgradation of the standardised approaches also. We are considering calibrating the capital requirement under standardised approaches with the available data for market risk.
  - b. *How to strike a balance in regard to fee-based revenue streams of banks?* While non-interest income does offer diversification benefits, it may not necessarily be less risky than conventional loans. Apart from the financial risks, there are significant reputational risks, particularly when banks engage in distribution of third party products. There cannot be rule-based prescriptions in this regard. But it would be imperative for the bank Boards to closely understand the underlying risks, assess whether returns are commensurate with the risks and monitor such businesses of banks. For the market discipline to work, increased, granular disclosures of fee based income may have to be looked into.
  - c. *How to address conflicts of interest in banks' lending relationships and capital market activities?* Can the Chinese walls be really effective in ensuring real separation of these activities within a bank? This issue is also relevant in respect of banks' being allowed to trade on exchanges for clients.
  - d. *How to strengthen the rating regime?* The rating requirements in India are essentially driven by regulatory policies applicable to exposures of the regulated entities to various asset classes. It would therefore be imperative that the rating methodology employed for such activities is looked into by the regulator concerned.

The rating agencies are supposed to adopt a through the cycle approach while assigning ratings. The regulators will need to modulate the risk weights applicable to the external ratings dynamically as per their assessment of systemic risk.

Towards strengthening the framework for CRAs, the system needs to shift away from issue-rating to issuer rating - the rating assigned to a particular instrument cannot be taken as reflective of the credit risk of the issuing entity.

- e. *How to address excessive collateralisation of balance sheets?* In view of the SLR requirement, such collateralisation may not, as yet, be posing serious risks to bank balance sheets in India. However, significant reliance of market entities on collateralised overnight funding market (CBLO/market repo) and increasing use of collateralisation for OTC derivatives may still put strain on banks, particularly in times of systemic crisis. This aspect may have to be considered in framing leverage requirements for banks.
  - f. *How to increase the appetite for credit risk among non-bank institutional investors?* This would be a big challenge for the development of credit markets. At the structural level, two things would be critical here: an efficient legal framework to enforce security and a sound bankruptcy regime.
  - g. *Lastly, how to encourage true market development without the support of banks?* This can be a challenging task in a financial system still dependent on banks for financial intermediation. It is really a chicken and egg situation – without banks support, markets may not develop but once having allowed banks to provide support, it becomes impossible to withdraw it. Perhaps a middle ground many have to be explored.
37. I hope some of these issues will get deliberated during the course of this conference. These are broader policy issues which need to be debated and discussed among all stakeholders.