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Benchmarking Indian Regulatory Practices to the G20 Financial Reforms Agenda

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Benchmarking Indian Regulatory Practices to the G20 Financial Reforms Agenda

Anupam Prakash and Rajiv Ranjan [1]

Post the crisis of 2007-09, financial stability is regarded as a prime policy objective. The reemergence of threats to the banking system in the light of sovereign debt problems in advanced economies has reaffirmed the importance of pursuing financial sector reforms at the international level. The global regulatory reforms under the aegis of the G20 though started with the objective to address the weaknesses brought to light by the financial crisis, have now shaped into a forceful movement guiding international standards as well as national regulation. An assessment of the progress of the G20 initiatives towards financial regulation reveals that while a lot of progress has been made, much still remains to be accomplished. The core indicators of financial soundness reveal that since 2009, those G20 countries faced with banking sector problems have scaled up their capital and liquidity buffers. Indian banking sector displayed remarkable health and resilience during the recent financial crisis compared to its counterparts in the advanced economies. Hence, its core soundness indicators have not changed much since 2009. Nevertheless, financial regulatory reforms got a thrust in the light of the international reform agenda and India has put forward an impressive line of action on every front, be it, regulatory and supervisory issues pursued under G20 agenda viz., implementation of new capital and liquidity standards, accounting norms, cross border supervision, compensation reforms, or structural issues such as licensing of new banks, foreign bank presence, structure of financial holding companies, or financial stability measures including setting up of Financial Stability Development Council (FSDC). In fact, India is going forward on its agenda for second generation financial sector reforms which goes much beyond the adherence to the evolving international standards and into meeting the requirements of a high growth economy as well as promoting development, both in the short-term and over the medium-term.

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INTRODUCTION

Regulation of financial sector and benchmarking best regulatory practices followed by various countries has emerged as an important issue for achieving financial stability and expediting recovery of global economy in the aftermath of the recent global financial crisis (GFC). Based on the lessons from the crisis, several changes have been introduced in the regulatory framework across countries, and efforts are being made to evolve an international consensus, especially under the aegis of G20. Recent changes in the regulatory framework will have an important impact on the structure of the global financial system. The financial sector reforms initiated since 2009 at the global level gains importance at the current juncture as the legacy from the recent global crisis once again begins to impinge on the ongoing recovery process. The downgrade of the US long term sovereign rating by Standard & Poor's (S&P) in August 2011, and the sovereign debt crisis in the peripheral euro-area, could weigh heavily on the global economic prospects. The funding pressures on the European banks, which hold a large amount of government papers, have begun to reflect on the financial markets. According to the Global Financial Stability Report (GFSR) released by the International Monetary Fund (IMF) in September 2011, *'in the euro area, sovereign pressures threaten to reignite an adverse feedback loop between the banking system and the real economy'*. The slowdown in growth also leads to higher non-performing assets and weaknesses in the banking system. In the environment marred with slower recovery and mounting fiscal and financial uncertainties, it has become important to increase the resilience of the financial sector by carrying forward the reform process which was initiated following the recent GFC based on lessons from the crisis.

The financial crisis which originated as the sub-prime crisis in the US in August 2007 spread through various channels to become a full-fledged global economic crisis. No other financial crisis since the Great Depression has led to such widespread dislocation in financial markets, with such abrupt consequences for growth and unemployment, and no earlier episode was marked with such a rapid and sizable internationally coordinated public sector response. The US mortgage subprime crisis of August 2007 as the starting point, was followed by problems at some of the strong financial firms such as, Fannie Mae, the AIG and Meryll Lynch, culminating in the failure of Lehman Brothers in September 2008. The inability to service the collateralized debt obligations (CDOs)[2], freezing of the inter-bank liquidity market, and later refusing to lend to non-bank firms causing a collapse of the payment system and the financial sector problems spilled over to the real sector. The sequence of events pointed towards

[2] Warren Buffet described CDOs as the *financial instruments of mass destruction*.

banking-cum-financial factors at work during the crisis, and thus provided the impetus for a major overhaul of the financial regulatory system.

It was generally recognised that radical reforms were required to strengthen the stability and resilience of the global financial system and prevent the recurrence of systemic crisis. In view of the above, various international bodies, national supervisors and policymakers got together in instituting various reform measures at the global as well as national levels. The G20 forum, in particular, with its balanced membership of developed and developing countries, and through concerted and decisive actions has emerged as an important process in strengthening international cooperation for ensuring global recovery. While the initial priority of the G20 was to move quickly to stabilize financial markets and restore the global flow of capital, it was understood that there was an imminent need to address the root causes of the crisis, *i.e.*, the weaknesses in the financial system. The *Action Plan to Implement Principles for Reform,* developed at the Washington Summit (November 2008), has been carried forward through the successive summits at London (April 2009), Pittsburgh (September 2009), Toronto (June 26-27, 2010), Seoul (November 11-12, 2010) and Cannes, France (November 3-4, 2011) to mark major strides towards fixing the financial system. The G20 financial sector reforms initiatives towards strengthening the global financial system aim at fortifying prudential oversight, improving risk management, promoting transparency, and reinforcing international cooperation. G20 has thus established core elements of a new global financial regulatory framework that will make the financial system more resilient and better able to serve the needs of the real economy (FSB, 2011a).

This paper attempts to benchmark India's regulatory developments *vis-à-vis* the G20 financial reforms programme, which is still evolving as well as compare the financial performance of the Indian banking sector with other G20 countries. The paper is organised in six sections. As a background, the fragilities of the pre-crisis financial system and the lessons from the crisis are summarised in section II. The progress of the international financial regulatory reforms under the aegis of the G20 forum is traced in section III. Section IV presents the outcome of the G20 financial reforms process through an assessment of the progress in implementation and also of financial stability in G20

countries based on the major financial soundness indicators (FSIs). Section V analyses the influence of G20 financial sector agenda on the recent developments in Indian regulatory and supervisory system. How helpful the achievements on regulatory reforms by G20 have been in accelerating the pace of the second generation financial sector reforms in India is an area of interest. Section VI, as the concluding section, deals with the major implications of the G20 regulatory reforms both in the global and Indian context. It also charts the future agenda for the financial sector reforms in India and how this could find support from the G20 process.

I. LESSONS FROM THE CRISIS

The financial crisis caught wide ranging attention of policymakers, academia as well as general public in view of the huge economic and social cost (Claessens *et al.*, 2010). The immediate cause of the economic crisis of 2007-09 is generally attributed to the problems in the excessively leveraged financial system of advanced economies. It is widely acknowledged that the sudden disruption in the global financial system was contributed by excessive risk taking by banks and other financial institutions, combined with major failures of regulation and supervision which underestimated the underlying risks in the system. Regulations did not fully capture the set of risks banks were exposed to, particularly market, liquidity, and funding risks and the regulatory oversight framework was not sufficiently wide to capture the build-up of vulnerabilities in the shadow banking system. The national and international approaches to dealing with cross-border bank resolution and bankruptcy once the crisis hit, was also found to be weak and divergent. Many banks lacked adequate governance practices and risk management systems, and supervision was not effective in identifying and correcting these deficiencies. Resolution efforts of weak banks were hampered by the complexity and interconnectedness of the financial institutions, both domestically and across borders. The existing mechanisms for central bank liquidity support were also found to be largely insufficient. The GFC revealed that financial sector regulation, risk assessment, and resolution authority did not keep pace with the changing practices and innovations in the financial sector.

To begin with, supervisors launched the most comprehensive financial sector review in modern times, which is documented in numerous official reports. Prominent among these are: the G-30 (January 2009); the Geneva Report (Brunnermeier *et al*., January 2009); the de Larosière Group (EU, February 2009); the Turner Review (FSA, March 2009); Communiqué of the G20; the UN Commission of Experts on Reforms of International Monetary and Financial System (2009). These, along with countless papers emanating from IMF, BIS, OECD and other international financial institutions and academia as well as central bank speeches, helped to list out the lessons from the crisis.

Leverage and Systemic Liquidity Management

As discussed earlier, high leverage at some of the financial institutions has been a significant factor amplifying losses and leading to financial problems. The regulatory and accounting systems of the last decade had a tendency to exacerbate the procyclicality of the financial system (Andritzky *et al*., 2009). This highlighted the need to maintain buffers in consonance with anticipated future losses, prescribed in the form of 'economic cycle reserves'. With respect to strengthening capital and provisioning requirements, a fundamental review of Basel II rules was put in process for the purpose of gradually increasing minimum capital requirements, reduce pro-cyclicality, introduce stricter rules for off-balance sheet items, tighten norms on liquidity management and strengthen the rules for banks' internal control and risk management.

Securitisation Framework and OTC Derivatives

The existing regulatory structures encouraged the increased use of securitisation and the expansion of the 'originate and distribute' mortgage model. This was illustrated through several episodes. For example, Lehman Brothers' bankruptcy in September 2008, which accentuated the global financial crisis, was caused by the failure of a credit default swap (CDS) counterparty. This was followed by near-collapse of AIG, calling for one of the largest bailouts in the US history costing over USD 170 billion of tax payers' money. The AIG bailout was caused by large exposures to un-hedged CDS contracts written on sub-prime mortgage securities and acceleration of collateral calls due to housing crisis leading to severe financial strain. These cases along with a host of other credit events revealed a number of structural deficiencies in the over-the-counter (OTC) derivatives

markets including inadequate management of counterparty risk, interconnectedness of large market participants, non-transparency of transactions and positions, complexity concerning actual risk exposures and danger of contagion. This necessitated a revisit of the securitisation framework with requisite emphasis on oversight and transparency in the market for derivatives, particularly OTC, Collateralized Debt Obligations (CDOs) and their offshoots.

Credit Rating Agencies

During the crisis, credit rating agencies failed to detect the worsening of the financial market conditions and to adapt their ratings in time. They also failed to adapt to the new risks of the credit market, *e.g.*, structured credit products (derivatives) and hedge funds. Accordingly, the regulatory oversight regime for all credit rating agencies whose ratings were being used for regulatory purposes called for a thorough review. Given the global scope of some credit rating agencies, it was felt that the oversight framework should be consistent across jurisdictions with appropriate sharing of information between national authorities responsible for the oversight of credit rating agencies.

System-wide Approach to Regulation

The crisis has highlighted the need to adopt system-wide approach to regulation. At the first place, the scope of regulation needed to be widened to include all systemically important financial institutions (SIFIs), markets and instruments. Furthermore, regulators were required to look at system-wide risk and not just individual institution-specific risk. The macroprudential approach to regulation began to find more acceptability than the institution-specific or micro-regulation. Although a number of policy institutions, particularly central banks, enhanced their analysis of systemic risks in recent years, policy mechanisms to effectively translate these analyses into policy action were found to be lacking (Mohan, 2009).

Rethinking the Perimeter of Financial Regulation

The experience from the crisis illustrated that emerging systemic risks associated with the interaction of regulated and unregulated entities, activities and markets also needed to be addressed. Intermediating credit through non-bank channels can have

advantages, for example by providing an alternative source of funding and liquidity. However, as the recent financial crisis has shown, the shadow banking system[3] can also be a source of systemic risk both directly and through its interconnectedness with the regular banking system. It can also create opportunities for arbitrage that might undermine stricter bank regulation and lead to a build-up of additional leverage and risks in the overall financial system. Given the interconnectedness of private pools of capital, including hedge funds, with other parts of the financial system, an assessment of risks posed by them also assumed significance.

Valuation and Accounting Rules

Refining valuation and accounting rules to better assess the uncertainty surrounding the valuation of financial instruments came into prominence. Accounting standard setters were asked to accelerate efforts to reduce the complexity of accounting standards for financial instruments and enhance presentation standards. Global convergence towards a single set of high-quality accounting standards seemed to be a desirable goal through sharing of country-experience and technical assistance.

Compensation Schemes

Compensation practices, especially of large financial institutions, by encouraging excessive risk taking became one of the factors contributing to the GFC. One key governance issue was the executive compensation in financial and real sector firms which has been excessively high and often irrespective of performance. It was felt necessary to ensure that the compensation frameworks at financial firms are consistent with their long-term goals and with prudent risk-taking.

Cross-Border/Cross-Functional Regulation

Globalisation and greater consolidation of the banking system the world over have substantially enhanced the contagion and domino effect of a financial crisis necessitating enhanced coordination in policy action as well as cross-border crisis management. In view of the above, regulation and supervision of cross-border banks

[3] The "shadow banking system" can broadly be described as "credit intermediation involving entities and activities outside the regular banking system".

needed to be improved by maximising the flow of information between home and host country supervisors, sharing insights into the risks which firms are running. Recognising the need for regulation staying ahead of the curve, and for continually upgrading the skills and instruments for financial regulation and supervision, the idea of a 'college of supervisors' for all major cross-border financial institutions gained ground. The problem of how to handle cross-border financial failures in a world of national fiscal and legal frameworks also came into prominence (Goodhart, 2008).

Role of Central Banks

The experience from the crisis also reaffirmed the view that central banks should play a prominent role in maintaining financial stability and should have the necessary information base to do so effectively. Since central banks have the benefit of synergies between the tools at their disposal, an expanded role of central banks in financial regulation may increase the effectiveness of regulation (Nier, 2009). Emphasising inter-agency co-ordination, the respective roles of central banks, regulators, supervisors, and fiscal authorities regarding financial stability need to be revisited. The structure of this co-ordinating mechanism should be transparent, with clear assignment of roles, responsibilities and accountability for each authority. The co-ordination between central banks and regulators should not be limited to dealing with the crisis, but also in designing transition to a new and more stable financial market structure. Central banks should play a central role in maintaining financial stability and should have the necessary informational base to do so effectively.

As demonstrated in the foregoing analysis, not only the efficacy of the existing institutional frameworks and available policy instruments at the national as well as international levels in ensuring global financial stability put to question, but also the prevailing economic thoughts and established economic premises were put under scrutiny. Apart from enhancing capital and liquidity buffers, reducing procyclicality of financial markets, systemic risk and macro-prudential supervision, reducing moral hazard from too-big-to-fail institutions, evolving a regulatory landscape for credit rating agencies, derivatives and hedge funds, in other words, expanding the regulatory perimeter also seemed imminent.

II. G20 FINANCIAL SECTOR REFORMS: MAJOR INITIATIVES

The GFC had highlighted the inadequacy of the international institutions to perform their required task. This led to a series of reforms of the international financial institutions (IFIs) such as, creation of the Financial Stability Board (FSB) from the erstwhile Financial Stability Forum (FSF), governance and quota reforms at the international monetary fund (IMF), expanding the membership of BIS and some of the other IFIs. As mentioned earlier, G20 emerged as a major force in international economic policymaking post crisis. While the initial priority of the G20 was to move quickly to stabilize financial markets and restore the global flow of capital, the members acknowledged the need for not losing sight of the need to address the root causes of the crisis, *viz.,* the shortfalls in financial regulatory and supervisory practices. The regulatory reform agenda agreed by G20 leaders has elevated the process to the highest policy level and kept international attention focused on establishing a globally consistent set of rules.

Beginning with the nuts and bolts of the *Regulatory Fix Exercise* in Washington Summit (November 2008) (short and medium term action plan), the Leaders laid down the goals and conceptual framework for the regulatory reforms in London (April 2009), and the medium term (2010-11) regulatory path in Pittsburgh (September 2009). Strengthening the financial system and fostering financial inclusion to promote economic growth features as one of the five priorities of G20 under the current Mexican presidency. Thus the initial action plan toward fixing the financial system adopted at Washington Summit, gradually developed into *Principles for Reform*, of which several reform agenda are well into the process of shaping into international standard and national regulation (Global Financial Stability Report, IMF, Oct 2011). The Seoul Summit of November 2010 delivered on two key areas *viz.*, Basel III and regulation of SIFIs, and added other items such as emerging market and developing economies (EMDEs) perspective to regulation, market integrity and consumer protection into limelight. At the Cannes Summit November 2011, it was agreed to reform the FSB to improve its capacity to coordinate and monitor the G20 financial regulation agenda, which is being carried forward under the current Mexican Presidency.

The G20 Financial Sector Regulatory Reforms has the distinction of being carried out at a global level and also having a comprehensive coverage to include products, markets, institutions as well as regulatory frameworks. Even though national authorities are prioritizing the G20 reform agenda as per their requirements, certain key common elements can be identified (Wellink, 2011). The core elements include strengthening bank capital and liquidity standards, addressing the regulation and resolution of SIFIs, expanding and refining the regulatory perimeter, improving the over-the-counter (OTC) and commodity derivatives markets, developing macro-prudential frameworks and tools, strengthening and converging accounting standards, and strengthening adherence to international supervisory and regulatory standards and taking countermeasures against non cooperative jurisdictions (NCJs).

One of the key pillars of the G20 regulatory reforms is the international assessment and peer review. At the global level, the assessment and review process is being substantially enhanced in order to ensure consistency in implementation across countries and identify areas for further improvement in standards and principles. This provides the useful feedback loop. In this regard, the financial stability assessment program (FSAP) jointly undertaken by the IMF and the World Bank, and the FSB's peer review are acting as means of fostering consistent cross-country implementation of international standards. As such, the FSB developed the Coordination Framework for Implementation Monitoring (CFIM) to promote effective and prioritized implementation monitoring of policies, recommendations and standards developed by various international organizations and standard setting bodies.

The regulatory reform agenda is being implemented as per a defined timeline. It has been recognised from the very beginning that the implementation of the new framework had to be calibrated cautiously such that any possibility of adverse effect on the recovery process could be avoided. As it was understood the specific timelines agreed at Pittsburgh needed to be revised subsequently in line with the progress made on individual agenda items.

Implementation mechanism is meant to work at two planes. One, international policy developments by Basel Committee on Banking Supervision (BCBS) of the Bank

for International Settlements (BIS), International Accounting Standards Board (IASB), *etc*. and two, national implementation of these policies as well as some independent measures initiated by national authorities. Thus, international bodies along with national authorities have been working together to make this process a success. The support from international organizations, particularly the Financial Stability Board (FSB), the BCBS and the IMF has been noteworthy. The FSB's role in this process stems from its unique capacity as a forum for the international standard setters and other international bodies, as well as officials from regulatory agencies, central banks, and treasuries of its member countries. The IMF, for its part, also has a unique role to play, given its universal membership, its macro-financial mandate, and its well-established roles in the area of bilateral and multilateral surveillance and technical assistance.

Bank Capital and Liquidity Standards

The 'Basel III' rules text were issued by the BCBS on December 16, 2010 with a view to ensuring that banks are adequately capitalized and have sufficient access to funding to deal with current risks. The BCBS package of reforms mainly includes increasing the minimum ***common equity*** requirement from effective 1 per cent to 4.5 per cent; an additional ***capital conservation buffer*** of 2.5 per cent; increasing the ***Tier I capital*** from 4 per cent to 6 per cent; and a countercyclical buffer within a range of 0 per cent - 2.5 per cent of common equity or other fully loss absorbing capital to be implemented according to national circumstances. The other important elements of Basel III include considerable enhancement in the quality of capital; improvement in the risk coverage of the capital framework; introduction of a leverage ratio as a supplementary measure to the risk-based capital requirements; and introduction of global minimum liquidity standards. Basel III will be translated into national laws and regulations by January 1, 2013, such that it could be fully phased-in by January 1, 2019. The new liquidity standards will be implemented, after an observation period and subject to a review clause. The Committee is focused on ensuring that the calibration of the liquidity framework is appropriate. All national authorities have been advised to meet their commitment to implement fully and consistently the Basel II risk-based framework as well as the Basel II-5 additional requirements on market activities and securitization by

end 2011 and the Basel III capital and liquidity standards, while respecting observation periods and review clauses, starting in 2013 and completing full implementation by January 1, 2019.

Addressing Systemically Important Financial Institutions (SIFIs)

The G20 is working towards ensuring that no financial firm is "too big to fail" and that taxpayers should not bear the costs of resolution. On November 4, 2011, at the Cannes Summit, the FSB comprehensive policy framework was endorsed, comprising Key Attributes of effective resolution regimes, Global Systemically Important Banks: Assessment Methodology and the Additional Loss Absorbency Requirement; and Intensity and Effectiveness of SIFI Supervision. Specific measures focus on global SIFIs (G-SIFIs) to reflect the greater risks that these institutions pose to the global financial system. To this end, the FSB identified the initial group of 29 G-SIFIs for which the resolution-related requirements will need to be met by end-2012, and additional loss absorbency requirements to be met from 2016. The FSB also published an initial list of G-SIBs, to be updated each year in November. G20 nations will implement the FSB standards and recommendations within the agreed timelines and commit to undertake the necessary legislative changes, step up cooperation amongst authorities and strengthen supervisory mandates and powers.

To extend expeditiously this framework to all systemically important financial institutions, the FSB in consultation with the BCBS, is working assessment methodology for Key Attributes (first draft expected by mid-2012); thematic peer review to assess implementation of the Key Attributes (second half 2012); G-SIFI resolvability assessments, recovery & resolution plans and cross-border cooperation agreements (by end-2012); and work on extension to domestic banks (report to G20 Ministers and Governors in April 2012), global insurance companies (methodology by June 2012), and global non-banks (methodology by end-2012).

OTC Derivatives Reforms

With a view to improving transparency in the derivatives markets, and mitigating systemic risk, and protecting against market abuse, in September 2009, G-20 Leaders

agreed in Pittsburgh that all standardised OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties. Noncentrally cleared contracts should be subject to higher capital requirements. It was also agreed upon that OTC derivative contracts should be reported to trade repositories. The G20 Leaders in the Seoul Summit of October 2010 endorsed the FSB's 21 recommendations for implementing OTC derivatives market reforms (the October Report) concerning standardisation, central clearing, exchange or electronic platform trading, and reporting of OTC derivatives transactions to trade repositories. The G-20 Leaders have mandated the FSB with regular monitoring of OTC derivatives market reform progress by all member jurisdictions. The FSB has created a working group to assess potential overlaps or gaps across jurisdictions in their implementation. The FSB is also coordinating the works to establish global legal entity identifier (LEI) which uniquely identifies parties of financial transactions, the proposals of which would be presented by the June 2013 Los Cabos Summit.

Shadow Banking

The "shadow banking system" can broadly be described as "credit intermediation involving entities and activities outside the regular banking system." According to one measure, the global shadow banking system grew rapidly before the crisis, from an estimated US$ 27 trillion in 2002 to US$ 60 trillion in 2007, and remained at around the same level in 2010[4].

At the Seoul Summit 2010, the G20 Leaders requested FSB, in collaboration with international standard-setting bodies, to develop recommendations for strengthening the regulation and oversight of the "shadow banking system" by mid-2011. Accordingly, the FSB has formed a task force to develop initial recommendations for discussion, and workstreams have been launched to cover regulation in five areas: (i) banks' interaction with shadow banking entities (BCBS); (ii) susceptibility of money market funds to runs (IOSCO); (iii) Prudential regulation of other shadow banking entities (FSB); (iv) Retention requirements and transparency in securitization (IOSCO); and (v) Margins and haircuts in securities lending and repo (FSB). In October 2011, the FSB reviewed work

plans to strengthen the oversight and regulation of shadow banking. The work plan towards developing policy recommendations was established during the FSB Plenary Meeting in January 2012.

Developing Macro-prudential Frameworks and Tools

The global crisis exposed gaps in the public policy toolkit to deal with systemic risk that had far-reaching economic and social consequences in many countries. Macro-prudential regulation has become the new frontier of policy development to strengthen financial systems inside countries and across borders. Generally, it is defined as policy that uses primarily prudential tools to limit systemic or system-wide financial risk. Though the understanding of how, when, what instruments and in which situation remains at a nascent stage, important steps have been taken, both nationally and internationally, in the area of systemic risk monitoring. Efforts have focused on closing data gaps and on developing better indicators and models to assess systemic risk both within and outside the banking system (the so-called 'shadow banking system'). There has also been progress in developing new macroprudential tools – international agreement has been reached on the introduction of countercyclical capital buffers and additional loss absorbency for global systemically important banks – and in assessing the effectiveness of existing ones. On the governance front, a number of jurisdictions have been adjusting institutional arrangements to support macroprudential policy, and international workstreams have examined key characteristics of these arrangements. In the Seoul Summit November 2010, G20 Leaders agreed to work further on macro-prudential policy frameworks and better reflect the perspective of EMEs in financial regulatory reforms.

Convergence on Strengthened Accounting Standards

The G20 Leaders in Seoul re-emphasized the importance to place on achieving a single set of improved high quality global accounting standards and called on the IASB and the Financial Accounting Standards Board (FASB) to complete their convergence project by the end of 2011 in areas where differences still persist (impairment, fair value

[4] FSB Press Release, Ref No 55/2011, October 27, 2011.

/amortized cost approach for classifying and measuring financial instruments). Similarly, BCBS and IASB should coordinate for fine tuning countercyclical provisioning within modified accounting standards. The IASB and FASB have made substantial progress toward the convergence of the key financial instruments standards and would be reporting to the G20 in April 2012.

Compensation Reforms

G 20 members, with their resolve to align compensation with prudent risk-taking, particularly at significant financial institutions, endorsed the FSB *Principles* and *Standards* on compensation. As mandated by Leaders, FSB is undertaking monitoring in this area. While the results of the second peer review (October 2011) point towards some progress in this area, but it also shows that gaps, inconsistencies and impediments to full implementation remain. In view of this, the FSB was urged to establish a permanent group to monitor the implementation of the agreed principles and standards and to issue additional guidance on the scope of its standards and the definition of material risk takers. The FSB will continue to report on the compliance of compensation practices in financial institutions and identify gaps and impediments to their complete implementation.

Reducing Reliance on Credit Rating Agencies (CRAs)

The FSB's high-level principles to reduce reliance on CRA ratings were published in October 2010. The FSB also presented a list of recommendations to reduce the reliance of the regulation on CRAs. The objective is to enforce market discipline and promote market participants' own assessment of the risks.

III. ASSESSMENT OF FINANCIAL SECTOR REFORMS UNDER G20

Progress of the G20 Regulatory Agenda

Substantial progress has been made on several measures recommended in the G20 Washington Action Plan and the London Summit Statement, especially at the level of international policy development. The G20 Seoul Summit in November 2010 marked the delivery of two central elements of the reform programme launched during Washington Summit in November 2008 *viz.*, development of the Basel III capital and liquidity framework (including leverage ratio regime, counter-cyclical measures and trading book

review) and a comprehensive policy framework, work processes, and timelines to reduce the moral hazard risks posed by systemically important financial institutions (SIFIs). The G20 has already delivered on some of the other key reforms like, standards for sounder compensation practices and measures to reduce the overreliance on external ratings and OTC derivatives market reforms principles. But further work is still needed to implement these commitments - fully, consistently and in a timely manner.

The FSB presented a status of progress achieved in global policy development and/or implementation at the Cannes Summit on November 4, 2011 (FSB, 2011b). This is largely based on information collected through FSB monitoring framework and tools such as thematic peer review reports (*e.g.,* compensation), detailed progress reports (*e.g*., OTC derivatives), IMN survey on implementation of G20/FSB recommendations and Reports by the Standard Setting Bodies (SSBs).

Achievements so far

1. The shortcomings in the Basel capital framework that generated incentives for off-balance sheet securitisation activity have been removed (BCBS, 2009a and 2009b).
2. The weaknesses in accounting practices and national standards that generated similar incentives for off-balance sheet activities have been addressed.
3. The risks that banks assume in their trading activities have been brought under better control.
4. Strong new risk management standards for financial institutions have been issued and are being implemented, covering bank governance, the management of liquidity risk, underwriting and concentration risks, stress testing, valuation practices and exposures to off-balance sheet activities.
5. Banks' disclosures of their on- and off-balance sheet risk exposures have been materially improved.
6. The FSB Principles for Sound Compensation Practices have been integrated into the Basel capital framework.
7. Central counterparties have been introduced to clear credit default swaps, reducing the systemic risks from this market. Transparency and standardisation in this market have been increased and dealers have reduced their cross exposures through trade compression.
8. Stronger oversight regimes for credit rating agencies are being developed.

9. Good practices for due diligence by asset managers when investing in structured finance products have been issued, which will reduce their reliance on credit rating agencies.
10. Internationally agreed principles for the oversight of hedge funds have been issued.
11. Abusive short selling has been addressed.
12. Supervisory coordination and cooperation in the oversight of the most important global financial firms have improved with supervisory colleges established for all the large complex financial groups.
13. Firm-by-firm contingency planning is underway to implement the FSB Principles for Cross-border Cooperation on Crisis Management.
14. Strengthened arrangements for system-wide oversight have been developed in many jurisdictions.
15. Core Principles for Effective Deposit Insurance Systems have been developed and an assessment methodology is under preparation.
16. FSB completed the work on adherence to international prudential standards and address non-cooperative jurisdictions (NCJs) in February 2010 and determining those jurisdictions that are not cooperating fully or that show insufficient progress to address weak compliance with information exchange and cooperation standards in April 2011.

While a lot of work has been completed, a lot remains to be done. The FSB has developed a “traffic light” table presented at the Cannes Summit that summarizes where the G20 stands in fulfilling its commitments. It categorises reform area into green, amber and red categories according to their progress in policy development and implementation. Strengthening the FSB capacity resources and governance is also under discussion. While welcoming the first publication of the results of monitoring by the FSB to the public, the Cannes declaration proposed that the scoreboard through traffic lights be prepared on an annual basis, so that necessary actions could be taken in the areas where deficiencies get identified.

More than Satisfactory Progress

The green category includes areas where the progress remains as per the initial plans, and those cases where actual implementation may be behind the schedule, but a catch up is possible. The development of guidelines and strengthening supervision on banks’ risk management practices, including for securitisation, risk concentration,

internal controls, and stress testing and counterparty risk is progressing well. The FSB has been able to expand upon and formalize its outreach activities beyond the G20 membership. With regard to SIFIs, the ongoing work of FSB to develop measures for SIFIs including a resolution framework, higher loss absorbency capacity, more intensive supervisory oversight, robust core financial market infrastructure and other supplementary prudential requirements are on the track. The progress of subjecting all CRAs to a regulatory oversight regime consistent with the IOSCO Code of Conduct and across jurisdictions with appropriate sharing of information is also satisfactory. The work on developing recommendations to strengthen the oversight and regulation of the shadow banking system is also progressing reasonably well. The FSB approved initial draft recommendations at its July 2011 Plenary meeting and identified five areas, requiring further work. Dedicated workstreams are set up to focus on each of these areas. Proposed policy recommendations will be prepared by July 2012. As regards improving the OTC and commodities derivatives market, while the policy developments appears to be on track, their implementation is yet to take off. FSB, in collaboration with OECD and other international organizations (IOs), has performed well to explore and report to the G20 on options to advance consumer finance protection. FSB, IMF and BIS have also been working well on macro-prudential policy frameworks. FSB and IMF have also been collaborating on Early Warning Exercise.

Satisfactory Progress

The 'Amber' category characterizes those issues regarding which some initiatives have been put in place, but there are difficulties which could lead to overshooting the deadlines. In this category, there are several issues including strengthening and converging accounting standards and improving the regulation of hedge funds. G20 had called upon the IASB and the FASB to complete their convergence project and meet the objectives set at the London summit in April 2009, notably as regards the improvement of standards for the valuation of financial instruments taking into account their liquidity and investor's holding horizons and the strengthening of accounting recognition of loan-loss provisions. The accounting standard setters have completed work on off-balance sheet exposures and valuation of financial instruments, work is still continuing on

provisioning and complexity of standards. As regards adherence to international prudential and supervisory standards, more detailed and comprehensive implementation monitoring and assessments are needed, particularly for priority reform areas.

The follow-up review on compensation practices by the FSB finds good progress by national authorities and firms on implementation. However, further work is necessary to overcome constraints to full implementation. Although progress has been made on capacity building programs for emerging market and developing economies (EMDEs) on new regulations, whether the expectations of the EMDEs are being met might need to be assessed. FSB principles on reducing reliance on external ratings in rules and regulation has been developed, the international standard-setting bodies' (SSBs) and national authorities' follow-up on securitisation is progressing but work in some other areas is only just starting. While supervisory colleges have been established for significant cross-border firms, work is needed to improve their effectiveness.

Less than Satisfactory Progress

The 'red' category reflects areas where serious problems exist in meeting objectives/deadlines, and remedial actions are required. On reforming the OTC derivatives markets, it has been agreed that all standardized OTC derivatives contracts should be traded on exchanges or electronic trading platforms, where appropriate, and centrally cleared, by the end of 2012; OTC derivatives contracts should be reported to trade repositories, and non-centrally cleared contracts should be subject to higher capital requirements. Other jurisdictions are lagging and actual implementation across all dimensions will take longer everywhere. Secondly, although crisis management groups for major cross-border firms have been established, further work on recovery and resolution plans is needed. Adequate legal frameworks for crisis intervention are yet to be introduced in many jurisdictions. Thirdly, on macroprudential framework and tools, national policy frameworks and data are yet to be developed in many jurisdictions.

In view of the above, the G20 leaders are more determined than ever to fulfill their commitments made at Washington in November 2008 to ensure that all financial markets, products and participants are regulated or subject to oversight, as appropriate. The focus is currently on meeting the commitments notably on Basel capital and liquidity

framework, OTC derivatives, compensation practices and credit rating agencies, and intensifying monitoring to track deficiencies. The FSB has been called to establish a permanent group to monitor the implementation of the agreed principles and standards, report publicly on its results, and carry out an on-going bilateral complaint handling process to address level playing concerns of individual firms. The FSB is working to issue additional guidance on the scope of its standards and the definition of material risk takers.

Outcome of G20 Initiatives: Initial Assessment

In this sub-section, an attempt is made to assess the soundness of G20 financial systems since the initiation of the financial sector reforms in 2009. A comparison of the latest data on core set of financial soundness indicators (FSI) is made with their respective positions at end-2009 for G20 nations with special reference to India using the FSI database of the IMF. FSI are being popularly used as supporting data for monitoring the vulnerabilities of the financial system.

Profitability Ratios

The return on total assets (RoA) of banks, defined as the ratio of net profits to total assets, is one of the most widely used indicators of profitability. Higher RoA indicates the commercial soundness of the banking system. From the financial stability point of view, high RoA provides a level of comfort against potential shocks to the system, *i.e.*, banks would be able to operate without jeopardising the process of financial intermediation even in the wake of adverse shocks. The evaluation of the sensitivity of bank earnings to changes in relevant business conditions have become an important plank of risk assessment.

For the G20 economies, RoA ranged from 4.0 per cent (Argentina) to 0.3 per cent (US) (Table 1). Profitability of banks in 17 countries of the group5 improved generally, with the exception of Indonesia, Turkey and the UK. Banks in Japan and Germany, despite displaying deterioration in interest margin to gross income ratio, were able to improve their return on assets (RoA) and return on equity (RoE). The RoA of banks in advanced economies (*viz*., France, Italy, Japan, the UK and the US) were the lowest in

the range of less than 0.3 per cent displaying the continued difficulties faced by their banking system. For Indian banks, after showing a marginal deterioration, the RoA improved during 2010-11.

Table 1: Profitability Indicators

G20 Countries	**Date (Latest Data Point Available)**	Return on Assets	Return on Equity	Interest Margin to Gross Income
1	2	3	4	5
Argentina	**2010**	4.0	34.8	...
Brazil	**2011 Q1**	3.3	29.6	49.7
Canada	**2011 Q2**	1.1	24.5	48.3
China, P.R.: Mainland	**2010**	1.1	19.2	82.5
France	**2009**	0.3	7.2	44.7
India	**2011 Q1**	0.9	14.3	67.5
Indonesia	**2011 Q2**	1.2	10.4	57.7
Italy	**2010 Q2**	0.3	4.0	56.8
Japan	**2010 Q3**	0.4	9.2	67.2
Korea, Republic of	**2011 Q1**	1.3	16.7	69.0
Mexico	**2011 Jun**	1.6	16.0	70.3
South Africa	**2011 May**	1.4	19.3	50.4
Turkey	**2011 Q2**	2.4	20.4	57.5
United Kingdom	**2010 Q4**	0.1	1.0	50.6
United States	**2011 Q1**	0.3	2.3	65.1

Source: FSI database, IMF.

Colour	Meaning
Green	Increase since 2009
White	Stable
Red	Decline since 2009

Capital Adequacy

Bank capital is used as an indicator of bank soundness because of its role as the final buffer against losses that a bank may suffer. Capital requirements are now almost universally accepted and most countries use the Basel-like risk-weighted approach. This degree of harmonisation has made the CRAR a useful indicator for analysts in making both inter-bank and inter-country comparisons of bank strength.

The G20 is committed to start the phased implementation of the Basel III regulatory framework for capital and liquidity from January 1, 2013 with full application by January 1, 2019. In the meantime, countries like Canada, Germany, Indonesia, Japan,

[5] Data for Australia, Germany and Russian Federation are not available.

S. Africa, the US and the UK increased the CRAR of their banking system from the 2009 level (Table 2). These are mostly the advanced countries that had faced difficulties in their financial system during the crisis.

Table 2: Capital Adequacy

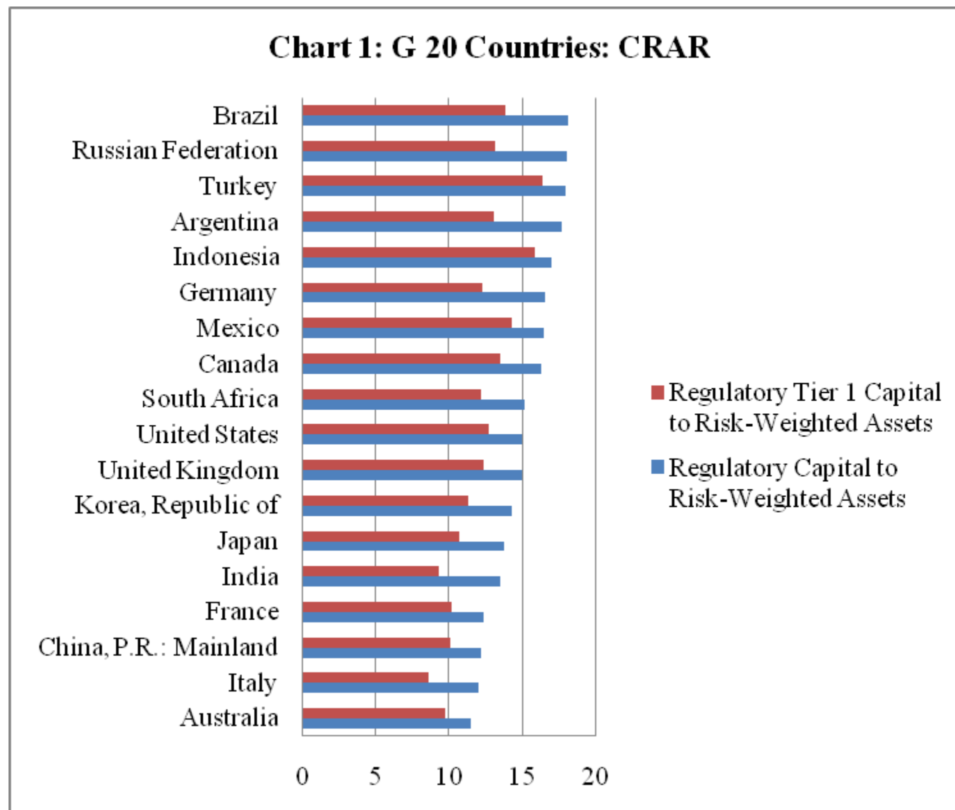
G20 Countries	Date Latest Data Point Available	Consolidation Basis	Regulatory Capital to Risk-Weighted Assets	Regulatory Tier 1 Capital to Risk-Weighted Assets
1	2	3	4	5
Argentina	2010	Other	17.7	13.1
Australia	2011 Q1	DCCBS	11.5	9.7
Brazil	2011 Q1	CBCSDI	18.2	13.9
Canada	2011 Q2	Other	16.3	13.5
China, P.R.: Mainland	2010	Other	12.2	10.1
France	2009	CBCSDI	12.4	10.2
Germany	2011 Q1	Other	16.6	12.3
India	2011 Q1	DCCBS	13.5	9.3
Indonesia	2011 Q2	Other	17	15.9
Italy	2010 Q2	CBCSDI	12	8.6
Japan	2010 Q3	Other	13.8	10.7
Korea, Republic of	2011 Q1	CBCSDI	14.3	11.3
Mexico	2011 Jun	CBCSDI	16.5	14.3
Russian Federation	2010 Q4	Other	18.1	13.2
South Africa	2011 May	DC	15.2	12.2
Turkey	2011 Q1	Other	18	16.4
United Kingdom	2010 Q2	DCCBS	15	12.4
United States	2011 Q1	DCCBS	15	12.7

Source: FSI database, IMF.

Colour	Legend
Green	Increase since 2009
White	Stable
Red	Decline since 2009

Overall, the CRAR of banks in G20 countries remained well above the prescribed 8 per cent under the Basel rules and ranged between 11.1 per cent (Australia) and 18.2 per cent (Brazil) (Chart1). The tier I CRAR was far more than the prescribed 50 per cent of the total CRAR. It may be noted that even those countries which witnessed a decline in

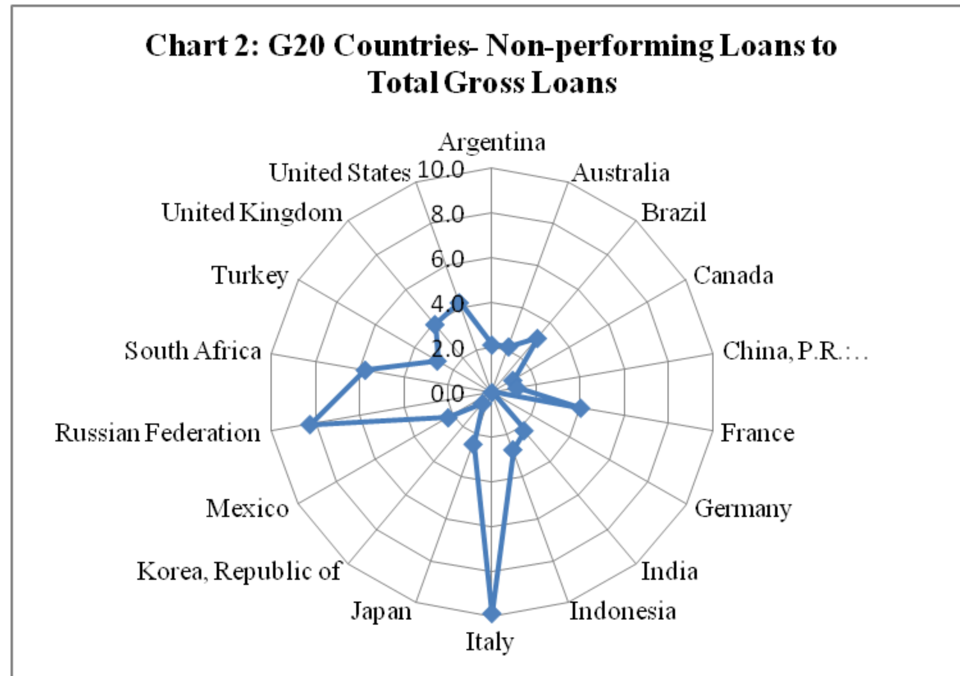
the overall capital levels of the banking system had sufficiently high CRAR, for example, in Argentina (17.7 per cent), Australia (11.5 per cent), Brazil (18.2 per cent), China (12.2 per cent), India (13.5 per cent), Italy (12.0 per cent), Russian Federation (18.1 per cent), and Turkey (18.0 per cent).



Asset Quality

Quality of assets of banks is a crucial indicator of financial health of the banking system and hence, financial stability. The ratio of non-performing loans (NPLs) to total advances is a common measure to assess the quality of assets of banks. A lower NPL ratio indicates prudent business strategy followed by a bank. The legal framework for recovery of loans also plays an important role in the burden of NPLs on the banking system in a country. The non-performing assets to gross advances ratio for most of the G20 countries lies within the radar with Italy, Russian Federation and South Africa being the main outliers.

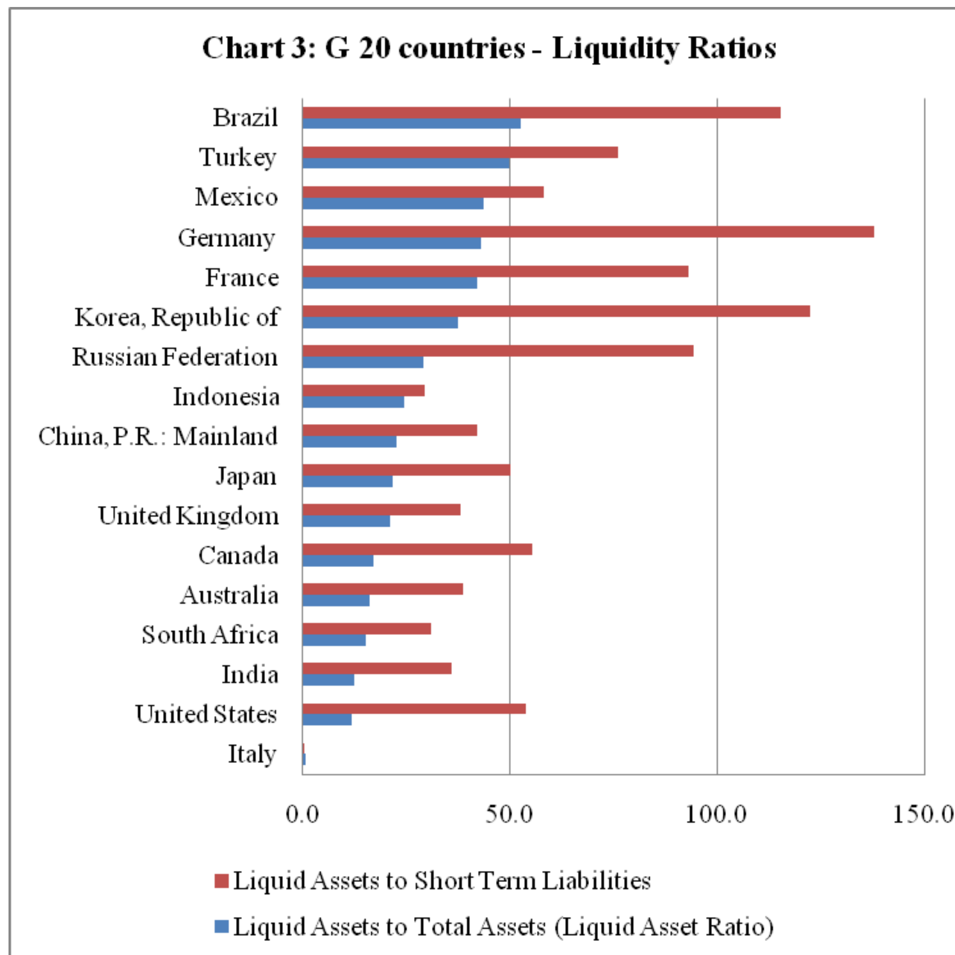
Indian banking system compares favourably on this account with the peer group with the NPA ratio at 2.2 per cent at end-March 2011 (Chart 2). In India, as per the latest data available though the gross NPA of banks increased in absolute terms, the ratio to gross loans has declined. In fact, since 2009, the asset quality has improved in most G20 countries - Italy being a major exception.



Liquidity

Liquidity risk, in the context of bank failures, is the risk that depositors will withdraw their deposits in large amounts or that banks will not have enough liquid assets to cover these withdrawals. Liquidity standards will be increased under Basel III.

Germany, Korea and Brazil maintained more than 100 per cent of their short term liabilities as liquid assets, and Brazil and Turkey had an overall liquid assets ratio of 50 per cent (Chart 3). In the Indian case, the dependence of the banking sector on volatile liabilities to finance their assets is quite limited, and statutory liquidity ratio (SLR) of banks ensures that there are enough liquid assets available with the banks.



The above analysis demonstrates that G20 nations, the banking sector indicators display a movement along the expected direction - those countries facing banking sector problems have improved their capital and liquidity buffers.

IV. IMPLEMENTATION OF REGULATORY REFORMS IN INDIA

Thanks to the financial sector reforms of 1990s[6], India faced the global financial crisis of 2007-09 from a position of strength. Similarly, the Asian financial crisis prompted the affected countries to strengthen and streamline their financial systems. As a result, most of the financial systems in the Asian economies including India could weather the financial storm which ravaged most of the advanced economies.

[6] These financial reforms have been based the Narasimham I and Narasimham II Reports.

Additionally, the limited openness of the Indian financial system worked in favour of India.

The regulation and supervision of the financial system in India is carried out by different regulatory authorities. The Reserve Bank regulates and supervises the major part of the financial system. The supervisory role of the Reserve Bank covers commercial banks, urban cooperative banks (UCBs), some financial institutions and non-banking finance companies (NBFCs). Some of the financial institutions, in turn, regulate or supervise other institutions in the financial sector, for instance, Regional Rural Banks, and the cooperative banks are supervised by National Bank for Agriculture and Rural Development (NABARD); and housing finance companies by National Housing Bank (NHB). Department of Company Affairs (DCA), Government of India regulates deposit taking activities of corporates, other than NBFCs, registered under companies Act, but not those which are under separate statutes. The Registrar of Cooperatives (ROC) of different States in the case of single state cooperatives and the Central Government in the case of multi-state cooperatives are joint regulators, with the Reserve Bank for UCBs, and with NABARD for rural cooperatives. Whereas RBI and NABARD are concerned with the banking function of the cooperatives, management control rests with the State/Central Governments. This 'dual control' impacts the supervision and regulation of the cooperative banks. The capital market, mutual funds, and other capital market intermediaries are regulated by Securities and Exchange Board of India (SEBI), Insurance Regulatory and Development Authority (IRDA) regulates the insurance sector; and the Pension Funds Regulatory and Development Authority (PFRDA) regulates the pension funds.

The blueprint for financial sector reforms in India was provided by the Report of the Committee on the Financial System (Narasimham I) in 1991, and Narasimham II in 1999 was tasked with the progress review of the implementation of the banking reforms since 1992. The reform measures introduced since 1990s were successful in ushering competition and efficiency in the financial institutions, thereby improving their health and resilience, and in increasing the depth and liquidity in the financial markets. Just before the onset of the GFC, India had begun contemplating the second generation

financial sector reforms with a view to creating a financial sector which could meet and support the requirements of a faster growing real economy (Prasad and Rajan, 2008). Expert committees such as the Committee on Financial Sector Reforms, 2009 and the High Powered Expert Committee on Making Mumbai an International Financial Centre, 2007 provided broad, overarching views of the role, consequences and timeline of the next steps towards reforming the financial sector in India. In fact, various measures/proposals underpinning the global regulatory reforms had already been brought into practice in India even before the crisis. These included restrictions on leverage for banking and non banking institutions, stringent liquidity requirements, counter cyclical prudential measures, certain deductions such as unrealised gains from Tier I capital, *etc.* (Chakrabarty, 2011).

Thus the outbreak of the crisis in 2008-09 put to test the outcome of the first phase of the financial sector reforms in India. India weathered the disruptions in the global financial system mainly due to a robust regulatory and supervisory framework, limited openness and global exposure of banking system with timely policy actions especially to manage liquidity. It was, however, acknowledged that financial sector reforms has to keep progressing with continued improvements in regulation, supervision and stability areas in order to avoid build up of new vulnerabilities. The GFC provided a renewed impetus to the second generation financial sector reforms in India whose major components could be identified as: (i) adherence to international standards, especially implementing G20 commitments; (ii) developmental measures; and (iii) stability measures.

Assessment of Progress made by India in Implementing G 20 Commitments

Since the 1990s, the regulatory and supervisory reforms initiated by the Reserve Bank embraced a calibrated approach towards adopting international norms and best practices through a consultative approach. Even though, the Indian financial system was opened up in a limited way, the international standards were introduced gradually with country specific adaptations, wherever required. The reform in Indian financial sector has thus been gradual, non-disruptive and a continuous process. A comprehensive self-assessment of India's financial sector was undertaken under the aegis of the Committee

on Financial Sector Assessment (CFSA) constituted by the Government of India, in consultation with the Reserve Bank, in September 2006. The CFSA submitted detailed reports in 2009 on financial stability and stress testing, financial regulation and supervision, institutions and market structure and transparency standards which coincided with the peak of the GFC. The overall assessment of CFSA found that the Indian financial system was essentially sound and resilient, and that systemic stability was robust. Compliance with international standards and codes was generally satisfactory and India was broadly compliant with most of the standards and codes.

As regards the post crisis period, the Reserve Bank has been playing an active role in various international fora, including G20, BCBS and Financial Stability Board (FSB), which are engaged in setting standards and formulating policies for safeguarding the financial stability and resilience. The pre-crisis approach of adopting international standards has continued in the post crisis period as well. The G20 regulatory agenda played a significant role in shaping our post-crisis initiatives to strengthen the regulatory and supervisory architecture based on the evolving international consensus after careful examination of their relevance to the India-specific context. It may be argued that the crisis and the subsequent regulatory reforms at the global level have added speed and intensity to the second generation financial sector reforms as seen in the spate of measures initiated since 2008. Several of these measures have been a part of the progress made by India on the *Implementation of the G20 Recommendations for Strengthening Financial Stability*. The progress on some important areas is given below:

Bank Capital and Liquidity Standards

The Reserve Bank of India released on December 30, 2011, the draft guidelines for Indian banks under Basel III wherein an accelerated phase-in period ending March 31, 2017 has been proposed. The guidelines will be finalized taking into account the suggestions and comments received up to February 15, 2012. Subsequently, the draft guidelines on Liquidity Risk Management and Basel III Framework on Liquidity Standards were released on February 21, 2012. The timelines for implementation will be guided by the need to ensure a non-disruptive transition and by a general realization that

the increased capital and liquidity requirements under Basel III need to be carefully phased in.

The Indian banks' current capital base and liquidity position are comfortable, and Basel III guidelines are not expected to put undue pressure on Indian banking system at the aggregate level. Both the capital to risk weighted assets ratio (CRAR) and the core CRAR of Indian banks at 13.5 per cent and 9.6 per cent as at end September 2011, respectively remained well above the regulatory requirement at 9 per cent and 6 per cent, respectively. Leverage ratios continued to hover around 6 per cent as against the Basel III requirement of a minimum of 3 per cent. Thus Indian banks start from a position of strength in the process of transition to Basel III regime, but many challenges lie ahead.

First of all, the actual requirements for capital are expected to be higher, though precise numbers are not known. Factors like the current levels of equity capital available with banks, growth rate of the economy, earning capacity of banks in the medium-term, impact of various regulatory adjustments/deductions prescribed under Basel III, and additional capital charges in the trading book for market risk and counterparty credit risk are expected to have a bearing on the actual amount of capital requirement. Furthermore, the higher capital requirements may increase the cost of funds for banks, increasing their lending spreads with downstream impact on the economy. Nevertheless, empirical studies indicate that the impact of Basel III, through rise in lending spreads, on growth rate will not be significant.

Commercial banks in India migrated to Basel II with effect from March 31, 2009 and the preparations for migration to the advanced approaches are underway. The timeline for implementation of advanced approaches for the three pillars (*viz*., credit risk, market risk and operational risk) under the Basel II framework was announced in July 2009. The guidelines for the standardised approach (TSA)/alternate standardised approach (ASA) for operational risk were issued in March 2010 and those for internal models approach (IMA) for market risk in April 2010. Draft guidelines for advanced measurement approach (AMA) for operational risk were issued in January 2011, and final guidelines were issued in April 2011. Guidelines for internal rating based (IRB) approach for credit risk were issued in December 2011.

Addressing Systemically Important Financial Institutions (SIFIs)

There already exists a strong monitoring and oversight framework of financial conglomerates (FCs) – a popular term for SIFIs in India[7], where the three major regulators *viz.*, the RBI, SEBI and Insurance Regulatory and Development Authority (IRDA) are involved. Of the 12 identified FCs, Reserve Bank of India is the principal regulator in eight cases, IRDA in three cases and SEBI in one case.

The current two-pronged approach encompassing off-site surveillance and periodic interface with the conglomerates, has proved to be quite robust in assessing the risks faced by these institutions. The current supervisory approach towards FCs is focussed primarily on more intensive supervision and no differentiated prudential requirements have been considered necessary. International regulatory requirements with its focus on global SIFIs may also not immediately mandate separate prudential requirements for the large domestic firms which are not likely to be considered as global SIFIs.

With the High-Level Committee on Financial and Capital Markets (HLCCFCM) no longer functional, the mandate for monitoring the functioning of SIFIs lies with the newly established Financial Stability and Development Council (FSDC). The Sub-Committee of the FSDC has expressed a need for improvements in the regulation and supervision of these large financial firms and is working on necessary steps. The criteria for identification of FCs have been strengthened and a revised offsite reporting format has been introduced to improve capturing of the group risk profile. Guidelines on the corporate governance framework and management / monitoring of risks arising of intra-group transactions and exposures are also being finalised. The supervisory cooperation and information sharing mechanism is also being strengthened thereby reducing scope for regulatory arbitrage. For effective supervision of FCs, arrangements for holding annual

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[7] RBI does not have a system/process to explicitly categorise a bank or a banking group as SIFI. FCs are effectively perceived/ treated as SIFIs. In identifying a Banking Group as FC, the key criterion adopted is the significant presence of the Group in at least two market segments (including the banking segment). Apart from this, the size of the balance sheets of the institutions, complexity of their products, processes and organisational structures *etc*. are also considered. Same criteria are adopted for the identification of other Financial Groups (those which are not Banking Groups) as Financial Conglomerates.

dialogue with the Group auditors of FCs, holding coordinated inspections of the FCs and through association of officers from peer regulators during on-site assessment of the lead/designated/parent entity of the FC are also on the agenda.

A new institutional structure has been created within RBI to improve the supervisory process for the systemically important banking groups which include all bank led FCs. Under the new structure the off-site and on-site supervisory processes in respect of these groups have been integrated with a view to exercising 'close and continuous supervision' on the large and complex banking conglomerates. These systemically important banking groups are also required to submit additional information on intra-group transactions and exposures, group-wide exposure to specific borrower(s), specific markets, sectors, geographies *etc*. so as to enable the supervisor to track build up of risks at system level.

At present, most of the financial conglomerates in India are organized under the Bank-Subsidiary Model, in which the bank is the parent of all the non-banking subsidiaries of the conglomerate. With a view to overcoming certain structural restrictions regarding expansion of banks into non-banking financial activities under the existing model, a Reserve Bank Working Group has recommended that the Financial Holding Company model should be pursued as the preferred model for the financial sector in India. However, necessary legislative and other changes will be required through discussions with the stakeholders for evolving an optimal structure for such companies under Reserve Bank's regulation.

There are several legal and operational difficulties with respect to the infrastructure in place for the orderly resolution of institutions, more so for complex financial institutions. There are limited resolution options available with the Reserve Bank and with Deposit Insurance and Credit Guarantee Corporation (DICGC), the deposit insurer.

OTC Derivatives Reforms

In India, the OTC derivatives markets developed within a regulated framework. A menu of OTC products was introduced in the market in a phased manner commensurate

with developments in the broader financial sector. The fundamental requirement for access to the derivative market remains the existence of an underlying commercial transaction or exposure. Thus, in the Indian context, the OTC derivatives market does not raise concerns of the magnitude in the advanced economies as the size of the derivative market remains limited and the product profile continues to be largely plain vanilla. Moreover, the GFC did not deter us to introduce credit default swaps for corporate bonds.

Unlike in most jurisdictions, where centralised trade reporting has come into focus only post-crisis, India has had arrangements for reporting of various OTC derivative transactions ranging from summary information to transaction level data. In India, centralised reporting of OTC trades in interest rate derivatives [interest rate swap (IRS)/forward rate agreements (FRAs)] commenced in August 2007 on the platform Clearing Corporation of India Limited (CCIL). Subsequently, a centralised clearing and settlement system on a non-guaranteed basis has been launched for OTC rupee derivatives in November 2008. Operationalising a guaranteed settlement of OTC interest rate derivatives is at an advanced stage. As regards foreign currency derivatives, guaranteed settlement of forex forward trades commenced in December 2009. In India, as per provisions of the Securities Contract Regulation (SCR) Act, OTC derivatives in equity are prohibited. These are exchange traded. Structured finance products are presently OTC traded in India.

The Reserve Bank has been working closely with CCIL to develop various modules for transaction reporting. The existing reporting arrangements for OTC markets encompass foreign exchange, interest rate, government securities, corporate bonds and money market instruments. A Working Group consisting of members of the Reserve Bank, the CCIL and market participants was set up to work out the modalities for an efficient, single point reporting mechanism for all OTC interest rate and forex derivative transactions (RBI, 2011e). The Working Group has made several recommendations towards expanding the menu of products which are reported and requiring such reporting through regulatory mandates. In the Indian context, CCIL is currently in the process of developing trade compression services for the rupee derivatives market. With a view to further broaden and deepen the market for government securities and the allied

derivatives, the RBI, in its October 2011 Policy Review, proposed to set up a Working Group on the G-Sec and Interest Rate Derivatives Markets.

Exchange traded interest rate futures (IRFs) on 91-day Treasury Bills with cash settlement in Indian Rupees have been permitted with effect from March 2011. The final guidelines on the cash settled 5-year and 2-year IRFs, including the final settlement price was issued on December 30, 2011.

An Internal Group within RBI explored the operational framework for introduction of CDS in India in a calibrated and orderly fashion with focus on real sector linkages and emphasis on creation of robust risk management architecture to deal with various risks associated with the product (RBI, 2011f). The final guidelines on plain vanilla single-name CDS for corporate bonds for resident entities, after taking into consideration the feedback/suggestions received from market participants, were issued on May 23, 2011 with the indication that they would be launched once the necessary market infrastructure was in place. The guidelines came into effect from December 1, 2011.

Comprehensive guidelines on OTC foreign exchange derivatives and overseas hedging of commodity price and freight risks were issued on December 28, 2010. These guidelines became effective from February 01, 2011.

Shadow Banking

In the Indian context, the 'shadow banking system', as it existed in much of the developed world, is largely irrelevant. NBFCs are regulated by the Reserve Bank. They are also required to comply with relevant provisions of Companies Act, 1956 (being companies) and SEBI regulations. The Reserve Bank's regulatory perimeter extends to financial entities accepting public deposits and those non-deposit taking financial entities involved in asset financing, providing loans and investments. The regulatory and supervisory architecture is, however, geared towards systemically important non-deposit taking entities (with asset size Rs.1 billion and above) with the supervisory framework for other non-deposit taking entities being limited.

Certain categories of entities carrying out non-banking finance companies (NBFCs) activities are exempted from Reserve Bank regulation by virtue of them being

regulated by another regulator *viz.*, housing finance companies (HFCs), mutual funds, insurance companies, stock broking companies, merchant banking companies and venture capital funds (VCF), which are regulated by the respective sectoral regulators. The above regulatory framework gives rise to two sets of issues which could engender possible regulatory gaps. The first set of issues pertains to a need to plug gaps and tighten regulatory controls for the entities regulated by the Reserve Bank. Another set of issues arise in the context of functional activities being unregulated due to the present system of entity regulation.

As regards the NBFCs under the regulatory purview of the RBI, a working group chaired by Smt. Usha Thorat in August 2011 reviewed the existing regulatory and supervisory framework with special focus on the risks in the sector (RBI, 2011c). The group has made several significant recommendations including introduction of liquidity ratio for all registered NBFCs; asset classification and provisioning norms similar to banks to be brought in phased manner for NBFCs; and NBFCs with assets of Rs. 10 billion and above should be inspected comprehensively on an annual basis with an annual stress test carried out to ascertain their vulnerability.

Apart from NBFCs, the regulation of microfinance institutions (MFIs) poses certain challenges such as, charging high interest rates, coercive recovery practices and malpractices in lending such as multiple lending, ever-greening of loans and lending beyond the debt sustainability of households. A Sub-Committee, under the Chairmanship of Shri Y H Malegam, submitted its report on January 19, 2011. (RBI, 2011d). Pursuant to its recommendations, a separate category of NBFCs operating in the microfinance sector designated as NBFC-MFIs has been announced by the RBI on December 2, 2011. Additionally, bank loans to all MFIs, including NBFCs working as MFIs, will be eligible for classification as priority sector loans only if the prescribed percentage of their total assets are in the nature of 'qualifying assets' and they adhere to the 'pricing of interest' guidelines to be issued in this regard. Bank loans to other NBFCs would not be reckoned as priority sector loans with effect from April 1, 2011. Further, following the sharp drop in collections by MFIs in Andhra Pradesh and some incipient signs of contagion spreading to other States, a special regulatory asset classification benefit was extended to

the restructured MFI accounts, which were standard at the time of restructuring, even if they were not fully secured.

Developing Macroprudential Frameworks and Tools

India has a well-evolved framework for macro prudential supervision. In India, the use of a macroprudential toolkit has achieved reasonable degree of success in countering the potential adverse impact of asset price fluctuations and high credit growth in some sectors on banks' balance sheets. The objective of macro-prudential policy has been to unburden the monetary policy from the objective of financial stability. However, important issues need to be addressed if the effectiveness of such policies is to be sustained.

Financial interconnectedness has emerged as a key issue in designing an effective system of macro-prudential surveillance. As the banking sector in India is highly interconnected, the Reserve Bank has started using network analysis to study the contagion impacts. As of now, the regulatory limits placed on interbank exposures seem to limit the contagion impact which can increase significantly if other entities like banks, non-banking financial companies and mutual funds are included for analysis.

Convergence with International Financial Reporting Standards

Nearly all FSB member jurisdictions have either adopted IASB standards (International Financial Reporting Standards - IFRS) or have programme underway to converge with, or consider adoption of, IFRS by end-2012. In India, the road map for convergence of Indian Accounting Standards with International Financial Reporting Standards (IFRS) has been laid down which would be accomplished in three phases (Table 3). India has also stressed that the representation on the IASB has to be more broad-based, as it is presently dominated by only a few organizations.

Table 3: Road map for convergence IFRS for Indian Companies

Phase I	Companies which are part of NSE – Nifty 50 Companies which are part of BSE - Sensex 30 Companies whose shares or other securities are listed on stock exchanges outside India Companies, whether listed or not, which have a net worth in excess of Rs.10 billion.	April 1, 2011
Phase II	Companies, whether listed or not, having a net worth exceeding Rs. 5 billion but not exceeding Rs. 10 billion	April 1, 2013
Phase III	Listed companies which have a net worth of Rs. 5 billion or less	April 1, 2014

A separate road map for banking and insurance companies was finalised by the Ministry of Corporate Affairs, Govt. of India in consultation with regulators. All insurance companies will convert their opening balance sheet as on April 1, 2012 in compliance with the converged Indian Accounting Standards. All scheduled commercial banks and those urban co-operative banks (UCBs) which have a net worth in excess of Rs. 3 billion will convert their opening balance sheet as at April 1, 2013 in compliance with the first set of Accounting Standards (*i.e.*, the converged Indian Accounting Standards). Urban co-operative banks which have a net worth in excess of Rs. 2 billion but not exceeding Rs. 3 billion will convert their opening balance sheets as at April 1, 2014 in compliance with the first set of Accounting Standards (*i.e.,* the converged Indian Accounting Standards). Urban co-operative banks which have a net worth not exceeding Rs. 2 billion and Regional Rural banks (RRBs) will not be required to apply the first set of Accounting Standards *i.e.*, the converged Indian Accounting Standards (though they may voluntarily opt to do so) and need to follow only the existing notified Indian Accounting Standards which are not converged with IFRSs.

As indicated in the Second Quarter Review of Monetary Policy (November 2010), a Working Group (Chairman: Shri P. R. Ravi Mohan) was constituted in July 2010 to address the implementation issues and facilitate formulation of operational guidelines in the context of convergence of Indian Accounting Standards with the IFRSs. Six sub-groups, constituted under the aegis of this Working Group, are closely monitoring the

developments at the international level, especially the progress made by the IASB in finalising the accounting standards relating to financial instruments, and fair value accounting, among others, and attempting to prepare operational guidelines within the framework of IFRS for the Indian banking sector. The Ministry of Corporate Affairs placed on its website, 35 Indian Accounting Standards (IND AS) converged with IFRS in February 2011. The Reserve Bank is also endeavouring towards skill development among banks with a view to ensuring smooth migration to the IFRS.

Compensation Reforms

Since 70 per cent of our banking sector is accounted for by public sector banks where compensation is determined by the Government, and where the variable component is very limited, the proposed reform to compensation structures is relevant in India only to the remaining 30 per cent of the non-public sector industry segment. Private, foreign and local area banks in India are statutorily required to obtain RBI's regulatory approval for the remuneration of their whole-time directors and chief executive officers. In evaluating these proposals in respect of Indian banks, Reserve Bank has historically ensured that the compensation is not excessive, is consistent with industry norms, and is aligned to the size of the bank's business and that the variable pay component is limited. In respect of foreign banks, the Reserve Bank has largely gone by the recommendation of the bank's head office.

However, reflecting the spirit of the global initiative on compensation structures, it was determined that there is need for reform in India too towards aligning compensation structures to FSB principles. Accordingly, in July 2010, RBI issued draft guidelines on Compensation of Whole Time Directors/Chief Executive Officers /Risk Takers and Control Staff inviting public comments. Moreover, in October 2010, the BCBS brought out a consultative paper titled "Range of Methodologies for Risk and Performance Alignment of Remuneration". The BCBS has since published the final report on 'Range of Methodologies for Risk and Performance Alignment of Remuneration' in May 2011. In July 2011, the BCBS in consultation with FSB has also published Pillar 3 disclosure requirements for remuneration. Taking into account the stipulations in these reports of BCBS and the comments received on the draft guidelines,

the Reserve Bank on January 13, 2012 issued final guidelines on compensation for implementation by private sector and foreign banks from the financial year 2012-13.

Reducing Reliance on Credit Rating Agencies

In India, there was no *prima facie* cause for concern in the functioning of the rating agencies even during the financial crisis. However, there remains a need to ensure that the CRAs comply with IOSCO codes of conduct and SEBI requirements and that generic issue such as accountability, transparency and conflicts of interest, which are also being grappled with at the international level, are taken care of.

In view of the fact that CRAs that rate capital market instruments are regulated by SEBI and that entities regulated by other regulators [RBI, IRDA, and Pension Fund Regulatory and Development Authority (PFRDA)] predominantly use the ratings, it was felt necessary to institute a comprehensive review of the registration, regulatory and supervisory regime for CRAs. HLCCFCM constituted a Committee on Comprehensive Regulation for Credit Rating Agencies (Chairman: Dr. K.P. Krishnan) which submitted its Report in December 2009 (RBI, 2009a). Furthermore, as a part of the terms of reference of the Committee, an assessment of the long term performance of the Credit Rating Agencies in India was undertaken by the National Institute of Securities Markets (NISM) (RBI, 2009b). Pursuant to the recommendations of the Committee report, SEBI has constituted an inter-regulatory Standing Committee, comprising representatives of RBI, PFRDA, IRDA and SEBI for taking up and examining issues relating to CRAs.

RBI has accredited four CRAs registered with SEBI for the limited purpose of using their ratings for assigning risk weights within the framework of the Basel-II Accord which has been implemented by all banks as at the end of March 2009. Prior to the accreditation, RBI undertakes periodic review of the rating agencies practices and procedures to ensure that they comply with the criteria prescribed for accreditation in the Basel II framework. This accreditation process has the limited purpose of using ratings for assigning risk weights within the Basel II framework. On the issue of reducing reliance on external ratings, banks are presently on standardized approach for credit risk and market risk which necessitates usage of external credit ratings. However, as and when banks will move to the advanced approaches wherein the banks are required to use

internal models for computing capital charge, usage of external ratings will reduce for computing capital.

Other Major Developments

RBI has also been attending the Supervisory College meetings of the major foreign banks (Deutsche Bank, Standard Chartered Bank, HSBC and Bank of Nova Scotia) which have sizeable presence in India. This has proved to be a useful and effective channel for sharing /exchanging supervisory information and establishing contacts with overseas supervisors. The hosting of Supervisory Colleges in respect of some of the bigger Indian banks is under consideration.

India is one of the 25 jurisdictions identified by the IMF as having systemically important financial sectors and for whom it has been decided to make financial stability assessment component of the FSAP a regular and mandatory part of surveillance. India's FSAP is scheduled for the calendar year 2011. India became a member of the Financial Action Task Force (FATF) on June 24, 2010.

The meeting of the officials from the IMF Statistics Department with the RBI officials, under the G20 data gaps initiative, was held on February 18, 2011. RBI has disseminated the updated GDDS framework and SDDS framework in September 2010. India has reported data on the entire list of 12 core FSIs for 2008, and intends to try to cover as many of the encouraged items as possible. Transition to quarterly International Investment Position (IIP) data with quarterly timeliness, is on track with the transition period scheduled to end on September 30, 2014. The RBI is making a major effort to improve data on the real estate market.

Developmental and Structural Reforms

Though the Indian banking system has emerged unscathed from the crisis, it is important to ensure that the banking system grows in size and sophistication to meet the needs of a modern economy[8]. Accordingly, India has initiated the process towards reforms in two structural features of the Indian financial sector *viz.,* dominant public

[8] Union Finance Minister' budget speech for 2010-11.

ownership and limited foreign presence in the banking sector. Taking due cognizance of the lessons from the crisis, RBI is working on these two areas.

Interest rate Deregulation

Interest rate deregulation had been a prominent feature of the financial sector reforms of the 1990s. Major reforms in the area of interest rates have been introduced by the Reserve Bank in the recent period. Effective October 25, 2011, the Reserve Bank deregulated the deposit rate on savings bank accounts. This move, besides improving the transmission of monetary policy, is also expected to bring saving deposit rates in sync with the changing market conditions.

Developments related to Licensing of New Banks in the Private Sector

The Indian banking sector remains predominantly in the public sector - thanks to the two waves of nationalization of banks in 1969 and 1980. The share of public sector banks in total banking system assets, however, declined from over 90 per cent in the early 1990s to around 73.7 per cent at end-March 2011. Another drive for providing licenses to a limited number of new banks has begun following the announcement made in the Union Budget 2010-11 and as indicated in the RBI's Policy Statement of April 2010. The Reserve Bank released a discussion paper on licensing of new banks on its website in August 2010, seeking views/comments of banks, non-banking financial companies (NBFCs), industrial houses, other institutions, and the public at large (RBI, 2010). Detailed discussions were also held with various stakeholders. All these comments were examined and the draft guidelines on licensing of new banks in the private sector were placed on the Reserve Bank's website in August 2011, inviting comments from all the stakeholders up to October 31, 2011. It was indicated in the draft guidelines that certain amendments to the Banking Regulation Act, 1949 are under consideration of the Government of India, including a few which are vital for finalisation and implementation of the policy for licensing of new banks in the private sector. Once the amendments are in place, and after examining the feedback on the draft guidelines, the final guidelines will be issued and the process of inviting applications for setting up of new banks in the private sector will be initiated.

Another Committee (Chairman: Shri Y.H. Malegam) reviewed the need for new UCBs given the thrust on financial inclusion in the economic policy and proposed entry of new commercial banks into the banking space. The Expert Committee recommended a greater presence of UCBs in unbanked districts and in centers having population less than 5 lakh, and giving priority for granting licenses as UCBs to the existing well managed co-operative credit societies meeting certain financial criteria like profits, capital adequacy, NPAs' proportion *etc*. (RBI, 2011g).

Developments related to Presence of Foreign Banks in India

The Reserve Bank of India placed on its website a discussion paper on the mode of presence of foreign banks through branch or wholly owned subsidiary (WOS) in January 2011 soliciting comments from all stakeholders ((RBI, 2011i). As indicated in the RBI discussion paper, the experience gained, particularly, during the recent global crisis, points towards the subsidiary form as a preferred mode for the presence of foreign banks. The regulatory comfort that local incorporation of wholly owned subsidiaries (WOS) provides as compared to the branches of foreign banks would also justify a preference for WOS. In India, policy on presence of foreign banks would be guided by two cardinal principles of reciprocity and single mode of presence. To contain dominance of foreign banks, it is proposed that when the capital and reserves of the foreign banks in India including WOS and branches exceed 25 per cent of the capital of the banking system, restrictions would be placed on entry, branch expansion and capital infusion.

Review of Supervisory Process

The High Level Steering Committee (Chairman: Dr. K. C. Chakrabarty) set up by the Reserve Bank and expected to submit its report by end-July 2012, would carry out a review of the approach to supervision as well as the extant onsite supervisory examination and offsite supervisory methods.

Financial Stability Measures

The Reserve Bank has been strengthening its financial stability assessments and to provide focused attention to the issue, a Financial Stability Unit (FSU) was established

within RBI in August 2009. The mandate of the FSU is to conduct macro-prudential surveillance of the financial system on an ongoing basis, to prepare financial stability reports, to develop database of key variables which could impact financial stability, to conduct systemic stress tests and develop models for assessing financial stability. Assessment of financial stability and the findings thereof are shared with financial institutions, market players and general public with the publication of the Financial Stability Reports (FSRs). Four FSRs have been published so far - the first one on March 25, 2010, the second in December 2010, the third in June 2011 and the fourth in December 2011. The FSRs also present an assessment of the Indian position on financial stability relative to the reform agenda being contemplated internationally. Considerable efforts have been made within the Reserve Bank to upgrade the methods and techniques for assessing the health of the financial system and for identifying and analysing potential risks to systemic stability. For example, RBI has started to use the network analysis which is an excellent tool to study interconnectedness and systemic risk.

With added significance of financial stability and inter-regulatory coordination in the post-crisis phase, the Government of India constituted the financial stability and development council (FSDC) chaired by the Union Finance Minister in end-December 2010. The Council is expected to improve regulatory coordination across agencies, to promote a level playing field by avoiding regulatory gaps and arbitrage, and to have an enhanced system-wide focus. The FSDC, whose members include the heads of the financial sector regulators and representatives from key departments of the Ministry of Finance, has met four times since its inception.

Despite the FSDC at the helm of financial stability issues, the RBI continues to play its crucial role through a Sub-Committee of the FSDC is chaired by the Governor of the Reserve Bank. The Sub-Committee meets more frequently (at quarterly intervals) to assess the health of the financial sector and monitor any incipient signs of vulnerability. It has replaced the erstwhile High Level Coordination Committee on Financial Markets (HLCCFM) as an apex forum for financial sector regulators. The Crisis Management Group (CMG) is being revived and made more into a more effective forum for dealing with unforeseen events following its October 20, 2011 meeting. It has been proposed that

a concept paper be prepared for consideration of the FSDC Sub-committee headed by the Governor.

Further, the Financial Sector Legislative Reforms Commission (FSLRC) has been constituted under the Chairmanship of Justice B.N. Srikrishna by the Central Government in March 2011, with a view to rewriting and streamlining the financial sector laws, rules and regulations to bring them in harmony with the requirements of India's fast growing financial sector. There are over 60 Acts and multiple Rules/Regulations in the sector and many of them date back decades when the financial landscape was very different from what is obtaining today. Large number of amendments made in these Acts over time has increased the ambiguity and complexity of the system. The FSLRC would simplify and rewrite financial sector legislations, including subordinate legislations, to achieve harmony and synergy among them. This will remove ambiguity, regulatory gaps and overlaps among the various legislations making them more coherent and dynamic and help cater to the requirements of a large and fast growing economy in tune with the changing financial landscape in an inter-connected financial world. In the long-term, it would help usher in the next generation of reforms, contribute to efficient financial intermediation enhancing the growth potential of the nation.

Performance of the Indian Banking Sector

Indian banking sector faced the stress because foreign investors pulled out of the economy and created a liquidity crunch. The tightened global liquidity situation in the period immediately following the failure of Lehman Brothers in mid-September 2008, coming as it did on top of a turn in the credit cycle, increased the risk aversion of the financial system and made banks cautious about lending. At the same time, corporates and retail investors exerted redemption pressures on mutual funds, some of which got transmitted to NBFCs due to their dependence for funds on mutual funds. Thus, despite not being getting a hit on the balance sheets, banks and other financial institutions were impacted by the indirect spillovers of the crisis during 2008-09. The deposit growth of commercial banks decelerated marginally during 2008-09 compared to the previous year; on the other hand, growth in bank credit decelerated at a faster rate than deposits during 2008-09. loans and advances of commercial banks have been growing at a compounded

annual growth rate (CAGR) of above 20 per cent, driven largely by targeted lending to priority sector which includes agriculture, micro and small enterprises, microcredit, education and housing. Banks' exposures to infrastructure construction also increased in recent years, fuelled by development needs, while more broad-based economic prosperity resulted in higher demand for residential and commercial real estate loans.

The sustained efforts of the Government, the Reserve Bank and the banks themselves have resulted in a competitive, healthy and resilient financial system. The major indicators of the Indian banking system in the period following the crisis also did not show any adverse movement. The profitability of Indian banks was maintained during the year of the crisis. The Return on Assets (RoA) during 2008-09 remained at last year's level of about 1.13 per cent. It fell moderately to 1.05 per cent in 2009-10. The CRAR of scheduled commercial banks (SCBs) after improving from 13.0 per cent as at end-March 2008 to 13.6 per cent as at end-March 2010, slipped back to 13.0 per cent at end-March 2011. Nevertheless, as at end-March 2011, under both Basel I and Basel II, the CRAR at 13.0 per cent and 14.2 per cent, respectively, was far above the BCBS norm of 8 per cent. The gross NPA ratio of SCBs remained intact during the crisis year at 2.3 per cent. As at end-March 2009 and end-March 2008, it increased moderately to 2.39 per cent (Table 4). The RBI uses cash reserve ratio (CRR) and statutory liquidity ratio (SLR) together with a wide range of other measures to ensure a robust liquidity backstop. The relatively high levels of SLR set at 24 per cent of net time and deposit liabilities (NTDL), in addition to CRR set at 6 per cent of NDTL, have enabled banks to cope well with liquidity pressures during the recent global financial turmoil.

Table 4: Select Banking Indicators@

Indicator	2006-07	2007-08	2008-09	2009-10	2010-11
I. Growth in Major Aggregates (per cent)					
Aggregate Deposits	24.6	23.1	22.4	16.8	18.3
Loans and Advances	30.6	25.0	21.1	16.6	22.9
Investment in Government Securities	9.3	22.7	25.9	17.3	6.6
II. Financial Indicators (as percentage of total assets)					
Return on Assets	0.9	1.0	1.1	1.1	1.1
Net Interest Margin	2.6	2.3	2.4	2.2	2.9
III. Capital to Risk weighted Assets Ratio					
Basel I	12.3	13.0	13.2	13.6	13.0
Basel II	-	-	14.0	14.5	14.2
IV. Gross Non-Performing Assets (as percentage of advances)	2.5	2.3	2.3	2.4	2.3

@: Relating to scheduled commercial banks.
Source: Report on Trend and Progress of Banking in India, several volumes.

As far as the financial sector is concerned, it recovered well from the impact of the crisis and has maintained its performance at its pre-crisis levels. Since the Indian financial system is bank dominated, banks' ability to withstand stress is critical to overall financial stability. Despite the fragilities observed in the global macro-financial environment, the performance of Indian banks remained robust during 2010-11. A series of stress tests conducted by the Reserve Bank in respect of credit, liquidity and interest rate risks showed that banks remained reasonably resilient. However, under extreme shocks, some banks could face moderate liquidity problems and their profitability could be affected (RBI, 2011b).

V. CONCLUDING OBSERVATIONS

Global Context

The G20 financial reform program, based on clear principles and timetables for implementation has established core elements of a new global financial architecture. The agenda adopted has been one of the most ambitious. While a lot of progress has been made on some of the issues, a lot remains to be done. Work on shadow banking, developing guidelines for commodity derivative markets, enhancing consumer protection are some of the issues on which the work is at an early stage and which are expected to

rise in prominence in the coming years. It is now being realized that financial stability has to be viewed not only in terms of lessons from the crisis, but also in terms of the future risks and challenges. New challenges and risks are emerging especially in the light of the sovereign debt problems in advanced economies on their banking sector. Among the new risks, FSB has highlighted the potential systemic risks from developments in the exchange-traded funds (ETF) market. Reforming financial regulation and supervision may, thus, be regarded as work in progress rather than an event.

As reflected in the Cannes Summit in November 2011, for the G20, the future agenda includes not only deriving breakthrough on some of the difficult issues, but also in ensuring that these international initiatives get translated into robust and consistent implementation at the national level. There has been major regulatory developments across nation states such as, enanctment of the Dodd-Frank Act in the US, setting up of Systemic Risk Board in Europe, *etc.* Effective implementation holds the key to sucessful reforms. Going forward, the priority would be on implementation of Basel III, and on ensuring that those institutions that are deemed not viable and not able to access private funds be resolved smoothly and expeditiously. The tradeoff between costs of regulation and efficiency of the financial system, however, would need to be balanced. The focus should be on a better and more effective (right) regulation rather than on tight regulation.

However, it is widely felt that the post-crisis financial reforms are mostly applicable to the financial systems in advanced economies. These may be viewed as policy responses to rectify the weaknesses of the financial system of advanced economies which were severely affected during the crisis and do not cater as much to the needs of the financial sectors of the EMDEs (Arner and Cyn-Young, 2010). The EMDEs including India displayed greater resilience during the crisis and remained largely insulated due to their limited openness. At the G20, the emerging market perspective to financial reforms has slowly gained ground. Based on a growing realization that the international reform agenda has been dominated by the concerns of the advanced economies, the G20 introduced the emerging economies perspective as an important plank of its regulatory agenda. Challenges from capital inflows, development of the corporate bond market, increasing the financing of both infrastructure and private sector real investment in order

to augment the rate of growth of potential output warrant special attention from EMDEs. In the recent period, financial inclusion has also been recognised as a key objective of policy in EMDEs. In addition, greater emphasis is being placed on the quality of service rendered by banks to their customers. Information technology and payment and settlement services have a crucial role in ensuring not only efficient banking services but also in financial stability, financial inclusion and customer service. From the emerging market perspective, operationally, pursuit of financial stability cannot be divorced from promoting development, both in the short-term and over medium-term.

It is still too early to say whether most of these reforms would be carried through to their logical conclusion and, if so, whether they would not be diluted. Some concerns are already being expressed on compensation practices, accounting standards, reining in rating agencies, financial transactions taxes and the implementation of the new capital standards. These concerns are both short-term as well as long-term. The short-term concern is that tightening regulatory standards before the financial sector has recovered from the crisis will make it even more risk averse which would have an adverse impact on financial intermediation for the real economy. As it is SMEs are finding it very difficult to obtain bank funding on account of tightening credit standards. On the other hand, the long-term concern is that unless the same standards are implemented in all jurisdictions simultaneously there would be scope for regulatory arbitrage that could result in financial activity migrating to less regulated jurisdictions elsewhere. Similarly, there is some apprehension that financial activity could once again migrate from the tightly regulated sectors to shadow banking.

Moreover, the international character of regulation is being questioned. The domestic or country-specific perspectives have become important. While all countries are committed to Basel III, major jurisdictions have separately come out with their own regulatory standards: the Dodd Frank Act in the United States, the Vickers Commission in the United Kingdom, while the EU has its own rules as well. How each country balances its own interest against those of international interests has complicated the process of building consensus on what is good for the world as a whole in financial regulation. In a similar vein, Dirk Schoenmaker (2008) put forward a financial stability

trilemma which emphasises the incompatibility within the euro zone of a stable financial system, an integrated financial system, and national financial stability policies. Nevertheless, in a highly interconnected and globalised world, some amount of international consensus is required specially to counter regulatory arbitrage and cross-border flow of risks. In that sense benchmarking the national regulatory framework with international regulatory standards and emergence of some sort of international consensus becomes essential.

Indian Context

The Indian financial system has changed considerably over the past fifteen years. Interest rates have been deregulated and competition and efficiency in the banking business has increased with new entrants being allowed. Since 2009, the financial sector reforms in India got a new impetus with India joining hands with the internatonal community in the post crisis reform of financial regulation, and playing a key role in the ongoing initiative through international foras like the G20, the IMF and the BIS in designing new regulatory and supervisory structure. India has made substantial progress on adopting the G20 reforms agenda including Basel III norms, convergence with IFRS, compensation reforms, cross-border supervision and regulation of non-banking internmediaries. As discussed in the paper, the progress of implementation of G 20 regulatory reforms agenda by India has been satisfactory if not impressive. Nevertheless, India's stated objective for financial sector reforms as expressed in the Cannes Action Plan - *to promote financial stability for strong and sustainable growth by streamlining the financial sector laws, rules and regulations and bring them in harmony with the requirements of a modern financial sector* - goes well beyond adherence to the G 20 workstreams. In view of the high scale of savings within the economy, there is a greater need for further financial-sector reform such as liberalisation of the entry norms, and streamlining the regulatory and legal framework While such reforms would improve the productivity of the financial sector they would also likely have positive spillover effects on the rest of the economy and help sustain rapid growth (OECD, 2011).

The benchmarking of regulatory practices in India *vis-à-vis* G20 agenda shows that though the G20 regulatory agenda is largely based on the lessons from the crisis, it

also draws from the practices and standards adopted by a few emerging economies like India, who were less affected and could tide over the crisis more swiftly than others. Accordingly, certain practices adopted even before the crisis in India (*e.g.*, macroprudential approach to regulation, certain accounting practices) have found international acceptance.

Also, the post crisis regulatory and supervisory developments in India are based not on the lessons from the past, but are being guided more by the future needs of the economy. The focus of the second phase of financial sector reforms starting from the second-half of the 1990s has been on strengthening of the financial system consistent with the movement towards global integration of financial services as also on structural reforms largely based on the suggestions made by the various high-level committees and groups so as to meet the requirements of a fast growing modern-market economy. Even though a large public sector in banking and limited openness to foreign banks proved helpful in isolating India from the onslaught of the recent crisis, India is now exploring ways to liberalise these two areas. India is working on liberalising the licensing of new banks, presence of foreign banks, bank holding company structure for the financial conglomerates - changes which have the potential of changing the financial landscape.

Similarly, despite the setback to securitisation and innovative products during the crisis, India is gradually introducing new financial instruments such as plain vanilla CDS to develop the corporate bond market, *albeit* having put in place requisite supervisory structures. Sufficiently strong regulation and supervision, with adequately broad perimeters, are being put in place with a view to preventing a build-up of financial vulnerabilities.

The progress of the reforms in India in the post crisis period has been remarkable considering a spate of measures being taken to improve financial soundness of banking sector which is a *sine qua non* for the financial stability in a bank-dominated country. In terms of financial sounndness indicators, the Indian banking system compares favourably to those of the other G 20 countries. The major indicators of the Indian banking system in the period following the crisis have not shown any adverse developments and the performance of Indian banks remained robust during 2010-11. A series of stress tests

conducted by the Reserve Bank in respect of credit, liquidity and interest rate risks show that banks are reasonably resilient. The single-factor sensitivity calculations suggest that the system would be able to withstand a range of risk specific and sector specific shocks occurring in isolation, and the impact of interest rate risk, foreign exchange risk and equity price risk would not be significant. The liquidity stress test results indicated that the SLR investments enabled the banks to withstand quite severe deposit runs. The network of the Indian banking and financial system have a tiered structure but limits on inter bank liabilities mitigate contagion risks. Distress dependencies between banks continued to be low (RBI, 2011a).

Going forward, a proper balance between regulation and liberalisation of the financial sector would become important. India is progressing well in adopting new techniques in supervisory assessments such as, network analysis and stress testing. India has also moved ahead on its agenda to modernise and improve the financial infrastructure with reforms in the financial markets and the payment and settlement system which enhance the efficiency of the financial sector - a crucial input in the real growth of the economy. With a view to addressing system-wide risks, the inter-regulatory coordination is also shaping up under the aegis of FSDC. While mergers and amalgamations and deposit insurance have broadly taken care of the bank failures, the resolution mechanism is being strengthened based on the evolving international practices. Issues requiring legislative attention include the orderly resolution of failing banks and financial institutions, domestically as well as cross-border, home-host regulatory cooperation in information sharing, convergence of Indian Accounting Standards with IFRS, empowering RBI for consolidated supervision, supervision of financial conglomerates, *etc*. Apart from the revival of the crisis management group, providing legal foundation for crisis management has acquired a sense of urgency. Further work on macro-prudential policy frameworks, restraining asset price bubbles, tools to help mitigate the impact of excessive capital flows are also on top on the agenda. The thrust of the reform package has been to fortify the banking system, correct the incentive framework and ensure its long term stability (Subbarao, 2010).

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