Chapter III

Financial Sector Regulation and Infrastructure

Financial sector regulatory reforms in India are being driven by a commitment to global regulatory standards as also domestic priorities. While the ownership structure and recapitalisation of public sector banks are contingent upon government policy and the fiscal situation, there is a strong case for subjecting them to the requirements of market discipline.

India's 'shadow banking' sector essentially refers to the large number of 'unregulated' entities of varying sizes and activity profiles, raises concern partly because of the public perception that they are regulated. Technology aided innovations in financial disintermediation such as peer-to-peer lending warrant a regulatory preparedness. A spurt in the activities of asset reconstruction companies (ARCs) driven by banks' efforts for cleaning up their balance sheets, calls for a closer look at the extant arrangements between ARCs and banks.

The regulation of securities markets in India is in sync with international developments, though mutual funds and other asset management activities in Indian markets do not carry risks similar to those experienced in other jurisdictions. The amount of lending by insurance companies, though small relative to banking sector's lending, warrants a coordinated approach on prudential frameworks to eliminate the possibilities of regulatory arbitrage. Revised norms for corporate governance as also warehouse and related processes are expected to strengthen the functioning of the commodity derivatives market. In the case of several defined benefit pension schemes, inadequate liability computation especially in the context of rising life expectancies can be a potential source of fiscal stress in the years to come.

Global Regulatory Reforms and India's Stance

3.1 The Financial Stability Board's (FSB) current focus is on completing the core aspects of the four fundamental areas of the G20 led international financial regulatory reforms: Basel III, 'too big to fail', shadow banking and the derivatives markets. However, the varied pace of implementation of some of the reform measures across jurisdictions with hints of 'national' approaches, underscore the need for adopting and adapting reform measures according to specific priorities.

Basel III Regulations

3.2 The regulatory push at the global level has improved banks' capital ratios[1]. However, a marginal improvement in terms of ratios – which are static measures of capital adequacy, may still not be interpreted as a move towards substantial strengthening of capital levels in the banking industry. The previous FSRs discussed issues related to the possibility of manoeuvring risk-weights, especially under internal models based approaches for different types of risks under the Basel framework. The Basel Committee on Banking Supervision (BCBS) is addressing the weaknesses in risk measurement by establishing a closer calibration of the risk model based approach with the standardised approach[2]. The minimum leverage ratio regulation under Basel III attempts to address this gap but the prescribed value of 3 per cent is perceived, by some stakeholders to be too 'light' to be effective as a 'back-stop'.

3.3 The relatively more stringent national approaches to bank capital regulations in many jurisdictions, including in the US and the UK, also indicate the need of going beyond Basel III prescriptions. This is also evidenced by the increasing

[1] BCBS (2013a), "Basel III Monitoring Report", BIS, September. (www.bis.org/publ/bcbs262.pdf)

[2] BCBS (2013b), "Fundamental review of capital requirements for the trading book", BIS, October. (www.bis.org/press/p131031.htm)

importance being accorded to stress tests[3] which, though based on Basel ratios, are in the nature of conditional dynamic measures with the risk adjustment occurring in the numerator (capital) at various points in time throughout the scenario[4]. Also, with differences in the features of the business model and varying compositions of entities and activities that are present in most jurisdictions, the 'broad-brush' approach to capital rules may face challenges to their effectiveness.

Capital Needs of Indian Banks for Basel III

3.4 The capital to risk weighted assets ratio (CRAR) for Indian banks under Basel III as at end March 2014 stood at a comfortable level of 12.9 per cent, although going ahead, there will be a need for raising additional capital to comply with the Basel III requirements. According to some rough estimates[5] based on a set of assumptions, Indian banks' additional capital requirements will be to the tune of ₹4.95 trillion over the period of phasing in of the Basel III requirements. This estimate does not include the impact of comprehensive pillar II capital add-ons under Basel III which Indian banks have not been subjected to so far. The Reserve Bank, as part of the Supervisory Review and Evaluation Process (SREP) under pillar II of Basel III, may, if required, prescribe a Supervisory Capital Ratio (SCR) above the regulatory minimum under pillar I, which banks need to maintain on an ongoing basis. The Supervisory Programme for Assessment of Risk and Capital (SPARC) framework of the Reserve Bank, under the Risk Based Supervision (RBS) regime, integrates SREP's main elements. SPARC aims to adequately capture and assess all the pillar II risks, including mainly those arising out of 'business', lack of adequate 'controls' and 'governance & oversight'. Estimates of additional capital requirements are expected to be considerably higher, especially for PSBs if SCR is considered (instead of the minimum pillar I regulatory ratios).

Market Valuations of Public Sector Banks

3.5 Even ignoring the component of supervisory capital requirements, public sector banks (PSBs) are expected to require additional capital to the tune of ₹4.15 trillion over the period of the phasing in of Basel III, of which equity capital accounts for ₹1.43 trillion, while non-equity capital will be of the order of ₹2.72 trillion. The government's contribution to PSBs' equity capital will be of the order of ₹900 billion at the existing level of the government's shareholding.

3.6 Amidst the government's fiscal position constraints, PSBs' ability to raise additional capital from the market depends on the conditions in capital markets and the 'market perception' of their relative strengths and weaknesses. The ratio of market price to book value (P-B ratio) of shares for PSBs is much lower than those of their private sector counterparts (Chart 3.1). With the notion of an implicit government guarantee behind PSBs, their valuations should be intuitively converging with industry averages, even after allowing for some differences in operational flexibility and efficiency *vis-à-vis* new private sector banks (NPBs)[6]. The reasons for this dichotomy need a detailed examination. A lower P-B ratio could lead to equity dilution and relatively 'thinner' spreading of earnings per share (EPS) for the same amount of additional capital raised and the prevailing lower valuations will cause a sub-optimal price for the inherent value, if the government intends to divest a part of its equity stock in PSBs.

[3] Stress tests also form part of Basel III regulations.

[4] Larry D. Wall, (2013), "The Adoption of Stress Testing: Why the Basel Capital Measures Were Not Enough", Federal Reserve Bank of Atlanta, Working Paper, December.

[5] Subbarao.D (2013), "Banking Structure in India", Address at the FICCI-IBA Annual Banking Conference, Mumbai, August 13, 2013. These estimates were based on two broad assumptions: (i) increase in risk weighted assets of 20 per cent p.a.; (ii) internal accrual of the order of 1 per cent of risk weighted assets and were carried out based on the original deadline (31 March 2018) for full implementation of the Basel III capital framework in India.

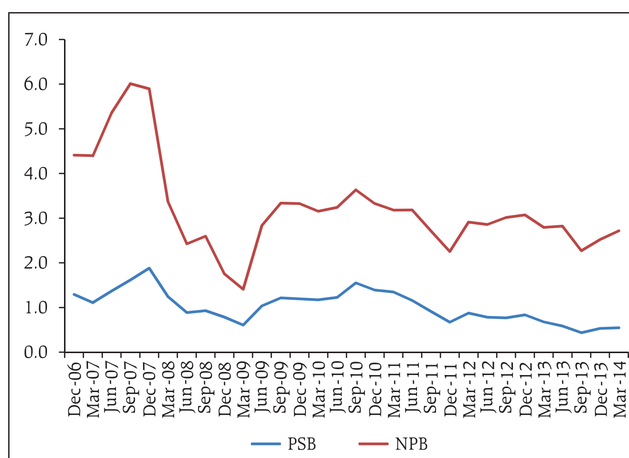
[6] The sub-group classification of New Private Sector Banks has been used for the purpose of this analysis.

3.7 Unlike most other jurisdictions India has not had any history of a full blown banking crisis and the episodes of financial instability faced by it in the past have mostly been in the nature of currency/external sector crises. While pillar I and pillar II regulations are important for all banking systems, it needs to be recognised that in the present Indian context, they may not be as critical as they might be in other jurisdictions which have faced banking crises. There is a need to carefully balance development priorities with compliance to international regulatory prescriptions at this stage of evolution of the Indian financial system.

3.8 At the same time, the Indian banking system needs an urgent and greater attention towards pillar III of Basel regulations, *i.e.*, subjecting banks to market discipline. Swifter progress towards a more robust emphasis on market discipline will result in better pay-offs not only for the Indian banking sector but also for the overall financial system. The time seems to be ripe for inducing banks, including PSBs, to approach capital markets – both equity and debt, in a competitive environment. Beyond a minimum (regulatory limit) level of equity capital, there is a need for increasing the role of other kinds of long-term 'hybrid' and debt instruments, which if imparted with certain loss-absorbency features, become eligible to be counted under additional Tier 1 and Tier 2 capital (for example, perpetual debt, non-cumulative preference shares and contingent capital instruments). This will result in improved market discipline by subjecting the banks to a more intense scrutiny of their performances.

3.9 The present situation can be used as an opportunity where demand for long-term funding driven by regulatory requirements may provide necessary impetus for making the corporate bond market evolve to the next level. In this context, the

Chart 3.1: Trend in Price to Book Value Ratios of Listed Indian Banks (quarterly average values)



Source: CMIE.

practice of subscribing to equity and debt capital issuances of public sector entities – both financial and non-financial, by other public sector entities should be kept within prudential limits. This will restrict the extent of cross holding of equity and debt within the public sector and help in the spreading of risks and ownership to a wider set of participants and an orderly progress towards more matured market mechanisms.

Basel III Liquidity Risk Framework for Indian Banks

3.10 BCBS issued the final standards on the Basel III liquidity coverage ratio (LCR) and liquidity risk monitoring tools in January 2013. In view of their implications for financial markets, credit extension and economic growth, LCR will be introduced in a gradual manner with effect from 1 January 2015, beginning with the minimum requirement set at 60 per cent, which will rise in equal annual steps to reach 100 per cent on 1 January 2019. The Reserve Bank issued its guidelines on LCR, liquidity risk monitoring tools and LCR disclosure standards in June 2014[7]. The guidelines take into account the range of high quality liquid assets (HQLA) available in Indian financial markets and their liquidity *vis-à-vis* the liquidity instruments prescribed in the BCBS standard.

[7] RBI (2014), "Basel III Framework on Liquidity Standards - Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standards", June 09, 2014. (http://www.rbi.org.in/scripts/NotificationUser.aspx?Id=8934&Mode=0)

Investment in government securities to the extent of 2 per cent of net demand and time liabilities (NDTL) - currently allowed under the marginal standing facility (MSF), is eligible to be included under Level 1 HQLA. While covered bonds, residential mortgage backed securities (RMBS) and corporate debt securities (including commercial paper) of rating between A+ and BBB- have not been included as Level 2 HQLA, eligible common equity shares with 50 per cent haircut have been allowed to be included as Level 2B HQLA.

3.11 Banks in India need to maintain the statutory liquidity ratio (SLR) by investing in specified assets as prescribed by the Reserve Bank. The present prescription requires banks to invest a minimum of 22.5 per cent of their NDTL in SLR eligible assets[8], which are essentially government securities. Banks stay invested in SLR eligible securities, which are akin to HQLA, not only to comply with statutory obligations, but also due to other factors such as risk-free status, a high collateral value and their importance in accessing central bank liquidity window. Hence, Indian banks have an adequate liquidity cushion to the extent that they are required to comply with SLR stipulations. A quantitative impact study (QIS) carried out by the Reserve Bank found that most of the banks satisfied the minimum criteria of LCR of 60 per cent even with the then SLR stipulation of 23 per cent (which has been subsequently revised to 22.5 per cent)[9]. In these studies, the excess holdings of the cash reserve ratio (CRR) and SLR and G-Sec holdings equivalent to 1 per cent of NDTL were considered as the banks' HQLA[10]. Going forward, as the LCR requirement increases progressively, the Reserve Bank may consider it desirable to further reduce the pre-emption of banks' resources through the stipulation of SLR in gradual steps, along with a commensurate decline in the held to maturity (HTM) dispensation[11]. Given the roadmap for fiscal consolidation to reduce fiscal deficit to 3 per cent of GDP by 2016-17 any decline in incremental availability of government securities may not thus impinge on SLR and LCR requirements.

3.12 While the intentions behind supporting these liquidity mandates may be good, the spill over to monetary policy formulations along with the possibility that the regulatory push may force the financial system towards a short-term market need to be assessed. The new mandates should not severely curtail banks' ability for 'maturity transformation', especially when markets for long-term funds are not yet developed.

Ending 'Too-Big-To-Fail'

3.13 Globally, the debate on some of the vital aspects of the reforms like policy proposals seeking to limit the size of the banks and/or requiring a minimum amount of long-term unsecured debt to be held by the 'complex' banks is still not completely settled. Furthermore, there are challenges being faced in many jurisdictions where major legislative measures are needed to fully implement the 'Key Attributes of Effective Resolution Regimes for Financial Institutions', specifically those related to the adoption of bail-in powers and other resolution tools, powers for cross-border cooperation and the recognition of foreign resolution actions. Certain structural reform measures (for example, separating the activities in different entities within the group,

[8] RBI (2013), "Master Circular-Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR)", July 1, 2013. (http://rbidocs.rbi.org.in/rdocs/notification/PDFs/64MLR260613.pdf)

[9] A study conducted by the Reserve Bank as on December 2013 on a sample of the 10 largest banks to assess their preparedness for the Basel III liquidity ratios indicates that the average LCR for these banks varied from 54 per cent to 507 per cent.

[10] One per cent of NDTL was the earlier allowance to banks that allowed them to borrow up to 1 per cent below the stipulated SLR under the marginal standing facility (MSF) without penalty for default on SLR maintenance. This access is now 2 per cent of NDTL below the stipulated SLR.

[11] Observation in the 'Report of the Expert Committee to Revise and Strengthen the Monetary Policy Framework' (Chairman: Dr Urjit Patel).

intra-group exposure limits and local capital and liquidity requirements) taken at a jurisdictional/ national level may help in curbing the tendency of systemically important financial institutions (SIFIs) to indulge in excessive risk-taking and contribute to improving their resolvability. However, the divergence in such structural measures imposed by different jurisdictions may adversely affect the cause of integration across national or regional markets and may result in incentives for regulatory arbitrage.

D-SIB Framework for India

3.14 There is no Indian bank in the list of global systemically important banks (G-SIBs). While the competitive structure of the industry has improved over the last two decades, there is still a significant degree of skewness in the size of the banks, as reflected by the fact that the second largest bank in the system is only around a third of the largest bank in terms of total assets (on balance sheet). The top 5 banks account for around 35 per cent of the total assets but none of the banks is seen to be large enough to becoming a significant global player. Thus, the TBTF issues being faced in most advanced jurisdictions are not as critical in the Indian context, though they remain important in terms of the evolution of the regulatory framework.

3.15 The Reserve Bank released the draft framework for identification of the Domestic Systemically Important Banks (D-SIBs) in December 2013. Indicators which will be used for assessment are size, interconnectedness, substitutability and complexity, with a larger weightage (40 per cent) given to size than to the other indicators. Based on their systemic importance scores, banks will be plotted into different buckets and D-SIBs will be required to have an additional common equity Tier 1 capital requirement ranging from 0.20 per cent to 0.80 per cent of the risk-weighted assets. D-SIBs will also be subjected to differentiated supervisory requirements and higher intensity of supervision based on the risks that they pose to the financial system. The computation of systemic importance scores will be carried out at yearly intervals and the names of the banks classified as D-SIBs will be disclosed in August every year starting from 2015.

Resolution Regime for the Indian Financial System

3.16 Work relating to an effective resolution mechanism has been initiated under the aegis of the Sub-Committee of the Financial Stability and Development Council (FSDC). The working group set up to suggest steps for strengthening the resolution regime submitted its report in January 2014[12]. Considering the special nature of financial institutions, as well as limitations in applying corporate insolvency laws to these institutions, the working group has recommended that there should be a separate comprehensive legal framework for resolving financial institutions and financial market infrastructures (FMIs). The main recommendations of the working group are in line with FSB's key attributes and include *inter-alia*, establishing a single Financial Resolution Authority (FRA), developing prompt corrective action (PCA) by all regulators for the entities under their regulatory jurisdiction and a financial holding company structure to improve the resolvability of financial conglomerates.

3.17 In addition to sufficient going-concern loss absorbency, one of the important requirements for enabling an effective resolution is related to the need for gone-concern loss-absorbing capacity (GLAC) in the form of a sufficient term debt (for example, bonds) for losses exceeding the equity base. GLAC is mainly expected to come from senior unsecured bonds or subordinate bonds and is conceptually different from (and in addition to) the notion of 'contractual bail-in'

[12] "Report of the High Level Working Group on Resolution Regime for Financial Institutions", May 2, 2014. (http://rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=31109)

debt instruments for recovery or resurrection[13]. In view of the need of implementing an effective resolution regime, the need for newer types of capital, especially debt and hybrid instruments, is being felt across jurisdictions. In the Indian context, the share of borrowings in total liabilities is very low, and therefore a stronger push is required for encouraging banks to increase the debt component of their capital structure through a mix of instruments, without seriously compromising on the prudential limits for leverage, including those amenable for 'bail-ins'.

Shadow Banking

3.18 The FSB policy recommendations for oversight and regulation of shadow banking relate to five areas- *viz.*, (i) reducing the susceptibility of money market funds (MMFs) to 'runs'; (ii) aligning the incentives associated with securitisation; (iii) mitigating the spill over effect between the regular banking system and shadow banking; (iv) addressing risks associated with securities financing transactions and (v) assessing and mitigating systemic risks posed by other shadow banking entities and activities. As the regulation of the banking sector is becoming stringent with increasing capital requirements and legal and compliance costs, more and more bank-like activities tend to move into the 'shadow banking' sector.

3.19 The motivation for regulatory reforms in the shadow banking space in developed economies, especially in the US, emanated from certain dilemmas that, on the one hand, there was a need to de-risk the overgrown complex banking industry which inevitably needs the presence of shadow banking entities to absorb those risks and the concerns over the role of shadow banking entities in consummating the financial crisis, on the other. For developing markets like India these concerns may not be fully valid, given the low penetration of banking services, much less complex financial markets and level of regulatory oversight exercised over shadow banking activities.

3.20 On the other hand, the alliance between technology and finance is heading towards a new paradigm with the emergence of peer-to-peer (P2P) lending/crowd funding technology platforms (Box 3.1). While in certain regulatory jurisdictions this space is being looked at as more favourable, some other regulators have raised concerns mainly relating to distress for lenders in the event of a sudden closure of such platforms[14]. While these platforms are still new to India and the scale of transactions is insignificant, this is a gap which requires regulatory attention. This is all the more important since in developed markets, mainstream financial market participants and products are making an entry into this space amidst concerns over regulatory arbitrage. Recently, the Securities and Exchange Board of India (SEBI) has proposed a framework to encourage and streamline crowd funding market in India[15]. The proposed framework provides for 'security based crowd funding' in India under three routes *viz.* equity, debt and fund. The proposal intends to develop an additional channel for entrepreneurs to raise early stage funding and seeks to balance the same with adequate investor protection measures.

3.21 The trend of large amounts of cash accumulation (in various liquid forms) by non-financial companies (NFCs), resulting from various reasons ranging from an uncertain economic environment to industry specific business cycles, has been commonly associated with advanced economies and other fast-growing big economies. The previous FSR mentioned

[13] While debt instruments like high-trigger CoCos are converted into equity when the firm's capital ratio falls below a prescribed but a reasonably high threshold value which helps in the recovery process, the low-trigger CoCos or Point of Non-Viability (PONV) instruments come into play for resurrection of the firm when the losses are large enough to exhaust the high-trigger CoCos but not so severe that solvency is affected. Paul Tucker (2013), "Banking reform and macroprudential regulation – implications for banks' capital structure and credit conditions", Speech at the SUERF, Bank of England conference, June 13, 2013.

[14] IOSCO (2014), "Crowd-funding: An Infant Industry Growing Fast, IOSCO Research Department", February 2014. (http://www.iosco.org/research/pdf/swp/Crowd-funding-An-Infant-Industry-Growing-Fast.pdf)

[15] SEBI (2014), "Consultation Paper on Crowdfunding in India", June17, 2014. (http://www.sebi.gov.in/cms/sebi_data/attachdocs/1403005615257.pdf)

Box 3.1: Peer-to-Peer Lending/Crowd Funding

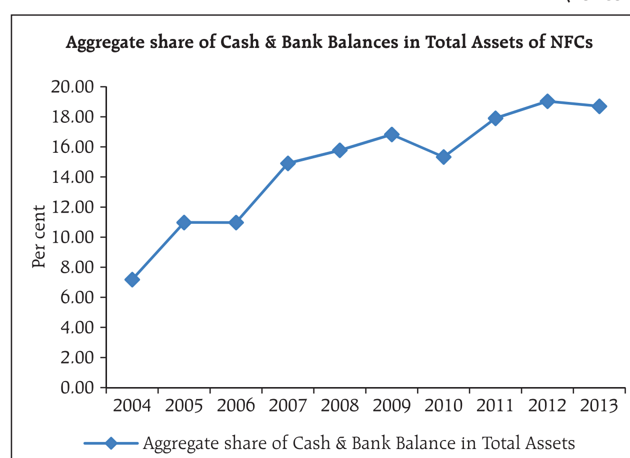
Peer-to-peer lending (P2P lending), also referred to as 'social investing', 'marketplace lending' or 'direct consumer lending' is the practice of borrowing and lending of money among unrelated individuals and business entities on online platforms without any role for a traditional financial intermediary like a bank or a non-banking financial institution. Crowd funding is a common term where small amounts of money from a large number of individuals/organisations is raised to fund an art work, social cause or start-up venture through web-based platforms. P2P lending is carried out through websites of P2P lending companies, using different lending 'platforms' which charge a relatively small commission for their services. P2P lending companies, apart from finding potential lenders and borrowers, also provide support services like verification of identity and financial details of the borrowers, credit models for pricing of loans and customer service to borrowers. P2P platforms are able to market themselves as modest community operations with an advantage of reduced costs for lending and borrowing. Among the different types of crowd funding (donations for a social cause and for artistic endeavours) and those that promise financial returns (by lending or equity) are of particular concern. They have also engaged in a securitisation process by bundling loans and selling them as asset backed securities to financial institutions. Thus, these crowd funding platforms have engaged in the traditional financial intermediation process by exploiting web-based, social media connectivity. P2P is catching up with traditional banking both in Europe and the US. Some attribute this growth to the frustration that borrowers face with regard to banks' lending practices. With the retail business model seeming to be firmly entrenched, P2P lenders are now allowing institutional investors, private equity firms and even traditional banks to lend through them. Indications are that investors can earn much better returns by buying the safest loans from some of the P2P platforms and now there are discussions about developing secondary markets for such loans and their securitised products.

a similar phenomenon of changing asset composition in favour of financial investments of Indian corporate entities[16]. Further, the aggregate share of cash and bank balances in total assets of large NFCs[17] has broadly seen an increasing trend since 2004 (Chart 3.2).

3.22 An analysis indicates a trend of an increasing share of 'other income' of NFCs, which is observed across sectors ranging from information technology (IT) to heavy machineries. These NFCs aiming to use the huge cash balances to improve their returns on assets, engage aggressively in 'financial' activities (commonly referred as 'treasury operations'), and the 'interest income' of some NFCs exceeds the overall net profit of some banks. The fact that the total 'financial' income (with a predominant share of

Chart 3.2: Aggregate share of Cash and Bank Balances in Total Assets of large NFCs[18]

(Per cent)



Source: Capitaline.

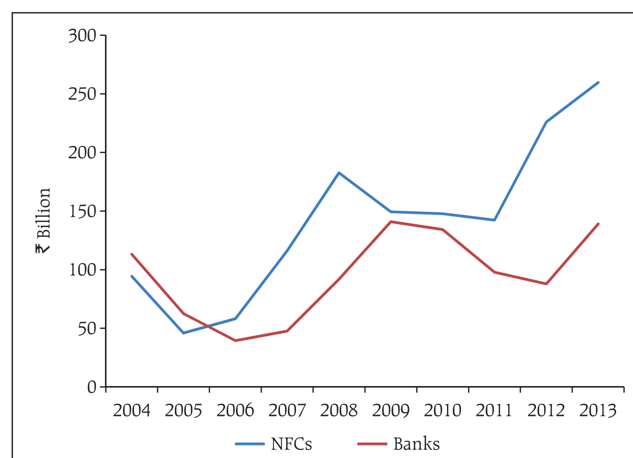
[16] Sample of 765 Non-Government Non-Financial public limited companies.

[17] Both public and private sector.

[18] For top 10 non-financial companies in terms of 'financial' (treasury) income in FY 2013.

'interest income') of the top 10 NFCs (in terms of income from financial operations as against their core activities) in FY2013[19] has consistently surpassed the comparable income items of their counterparts (top 10 banks in terms of treasury income)[20] in the banking sector, makes them important players in the 'financial' sector too (Chart 3.3). While the NFCs in the Indian system may not be directly engaged in credit intermediation at this stage, information regarding the non-core 'financial' activities of large NFCs may need to be captured as part of macro-prudential surveillance.

Chart 3.3: Income from Financial Activities of Non-Financial Companies and Treasury Income of Banks



Source: Capitaline, Database on the Indian Economy, RBI.

Need for Mapping of Size and Profile of Shadow Banking

3.23 With the present regulatory focus on deposit taking non-banking finance companies (NBFCs) and only large systemically important entities among the non-deposit taking NBFCs, those NBFCs which are below the asset size threshold of ₹500 million are not covered by regulation or surveillance of the Reserve Bank. Also the NBFCs whose activities, though in the nature of financial intermediation, do not fit into the 'principal business criteria' for regulation are not under regulation or oversight of the Reserve Bank. Given the relatively limited reach of the formal financial system, such entities may be playing an important role in supporting the efforts towards financial inclusion. However, there is a need to assess the collective size and profile of activities of the large number of non-bank financial entities functioning in the organised as well as the unorganised sector (including unincorporated entities which are outside the purview of the regulatory perimeter). With the relatively lower levels of financial awareness, this segment of scattered entities of different hues, involved in different kinds of activities which are directly or indirectly in the nature of financial/investment activities, may assume systemic importance because of the perception, *albeit* incorrect, that all financial activities are coming under some regulatory framework. Furthermore, ambiguities related to legal, regulatory and administrative aspects of certain activities, for example, prize chits and money circulation schemes, the unlisted collective investment scheme and multi-level marketing also point towards the need for clarity in the regulatory framework.

3.24 A preliminary study carried out by the Shadow Banking Implementation Group (SBIG) comprising of members from all financial sector regulators, concluded that there was a high degree of heterogeneity in business models and risk profiles across various non-bank financial entities in the organised (including the entities not 'registered' with any of the regulators) as well as the unorganised ('informal') sector. The study stresses on the need for a large scale survey by the National Sample Survey Organisation (NSSO) or other such agencies to estimate the size of the 'informal financial sector'.

[19] For this analysis, the 'financial' income for NFCs includes Interest income, profit (loss) on sale of investments, gain (loss) on cancellation of forward contract/forex transactions.

[20] For this analysis, the treasury income for banks includes net profit (loss) on sale of investments, on revaluation of investments and on exchange transactions.

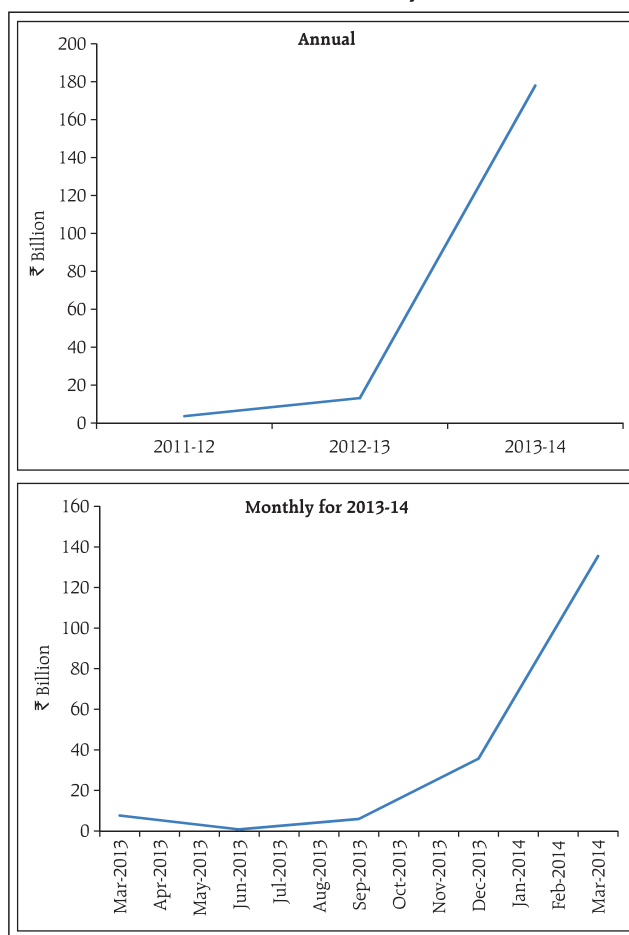
3.25 Apart from such NBFCs, SBIG has also identified 'exempted' provident funds, unregulated chit funds, co-operative and credit societies and primary agricultural credit societies as groups of institutions that need a greater degree of oversight. Also, government owned entities discharging the functions as special NBFCs which are exempt, by statute, from adherence to prudential regulations and given their systemic significance, are an area of concern. Certain other entities such as special purpose vehicles (SPVs) are not regulated and can cause over-leveraging and risks to the financial system.

3.26 The Reserve Bank is in the process of reviewing the extant regulatory framework for NBFCs, based on the recent developments in the sector and also the recommendations made by Nachiket Mor Committee. The proposed review will cover the legislative framework of the NBFC sector, asset classification and provisioning norms for NBFCs *vis-a-vis* that of banks – (including the need for raising Tier 1 capital requirement for NBFCs), corporate governance guidelines including 'fit and proper' criteria for their directors, regulation of deposit acceptance activity, consumer protection measures, present classification scheme of NBFCs and activity of lending against shares by NBFCs.

Asset Reconstruction Sector

3.27 In the context of the deterioration in the asset quality of banks, recent Reserve Bank guidelines[21] propose a corrective action plan that offers incentives for early identification of stressed assets by banks, timely revamp of accounts considered to be unviable and prompt steps for recovery or sale of assets in the case of loans which are likely to turn NPAs. There has been a spurt in the sale of NPAs by banks to asset reconstruction companies (ARCs) over the last few quarters (Chart 3.4).

Chart 3.4: Amount of Assets Sold by Banks to ARCs



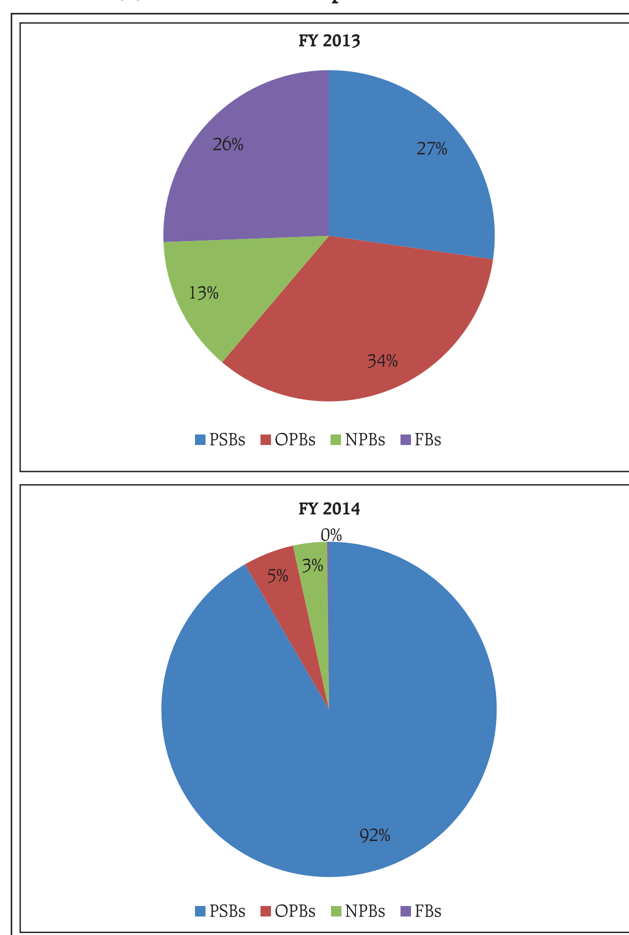
Source: RBI Supervisory Returns.

[21] RBI (2014), "Early Recognition of Financial Distress, Prompt Steps for Resolution and Fair Recovery for Lenders: Framework for Revitalising Distressed Assets", January 30, 2014.

3.28 The share of PSBs in the total amount of assets sold to ARCs reflects the acute stress on PSBs' asset quality and the need for prompt action (Chart 3.5). As the level of sales to ARCs may remain high during the next few quarters, the role of ARCs assumes greater importance. In keeping with the renewed focus on factoring and asset reconstruction as two pillars of India's financial infrastructure in the future, a slew of positive measures have been undertaken to rejuvenate the sector (Box 3.2).

3.29 As most of the securitisation activity is taking place predominantly with the issuance of securities receipts (SRs) rather than cash, there is concern that banks may tend to use this option to evergreen their balance sheets. SRs may not carry the stigma of non-performing assets (their value mainly being derived from the collateral and not based on the record of recovery), although the risk of loss of income on the asset still remains, in effect, with the originator, *i.e.*,

Chart 3.5: Share of Bank Groups[22] in Sale of Assets to ARCs



Source: RBI Supervisory Returns.

Box 3.2: Functioning and Regulation of ARCs and Recent Policy Developments

The SARFAESI Act, 2002 provides for securitisation and reconstruction of financial assets and enforcement of security interest and for matters connected therewith or incidental thereto by securitisation companies/ reconstruction companies (SCs/RCs) registered with RBI. SCs/RCs registered with the Reserve Bank of India are subject to entry point, minimum 'owned funds' norms and the 'fit and proper' criteria. SCs/RCs can acquire assets from banks and financial institutions and issue security receipts (SRs) to qualified institutional buyers (QIBs) and can resort to the measures for assets reconstruction as provided in the Act. A key advisory group constituted by the Government of India to study issues involving the lack of effectiveness of asset reconstruction companies (ARCs) had recommended certain measures including reserve price quotes by banks for auctioning their NPAs, gradual write-off of losses on sale of NPAs to ARCs, removal of cap by FIIs on investment in SRs, permitting ARCs to freely sell or lease businesses, acquiring NPAs underlying the SRs from other ARCs for debt aggregation and allowing ARCs to go public to raise capital. Several amendments to the SARFAESI Act, 2002 have been made as notified in January 2013.

Recent Policy Developments:

1. SCs/RCs are now permitted to acquire debt from other SCs/RCs subject to certain conditions and to convert

(Contd...)

[22] The sub-group classification of Old Private Sector Banks (OPBs) and New Private Sector Banks (NPBs) has been used for this analysis. FB refers to Foreign Banks in India.

(...Concld.)

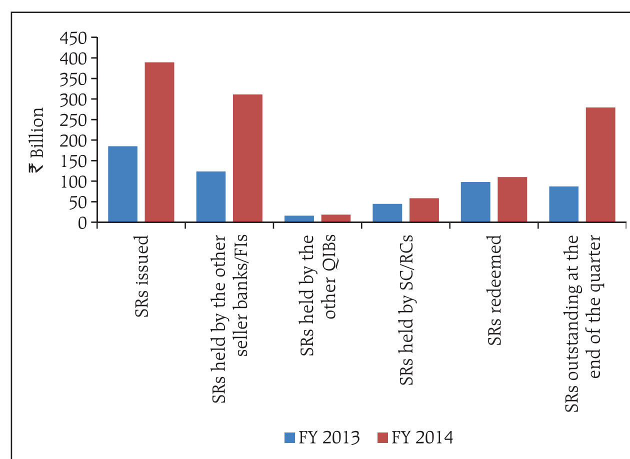
a portion of the debt into shares of the borrower company as a measure of asset reconstruction.

2. ARCs are required to obtain the consent of secured creditors holding not less than 60 per cent of the amount outstanding to a borrower as against 75 per cent earlier.
3. SCs/RCs with acquired assets in excess of ₹5 billion can float a fund under a scheme and utilise up to 25 per cent of the funds raised from QIBs for restructuring of the financial assets acquired.
4. SCs/RCs may participate in public auctions of non-performing assets conducted by their sponsor banks.
5. Promoters of the defaulting company/borrowers or guarantors are allowed to buy back their assets from SCs/RCs subject to certain conditions that are helpful in the resolution process and in the minimisation of costs.
6. Guidelines on a uniform accounting standard for ARCs have been advised for reckoning acquisition cost, revenue recognition and valuation of security receipts (SRs). The accounting guidelines are to be effective from accounting year 2014-15.
7. With a view to facilitating greater participation of foreign investors in providing capital to the asset reconstruction sector, the ceiling on foreign investment in ARCs has been increased, to 100 per cent, subject to the condition that no sponsor may hold more than 50 per cent of the shareholding in ARCs either by way of foreign direct investment (FDI) or by way of routing through foreign institutional investment (FII).
8. The limit of FII investment in SRs issued by ARCs has been enhanced from 49 percent to 74 percent. Such investments should be within FII limit on corporate bonds prescribed from time to time, and sectoral caps under the extant FDI Regulations.

the bank (Chart 3.6). Under the current framework, the 'real' incremental value addition of ARCs in the process of 'reconstruction' of assets, over banks' traditional skills and informational advantage (stemming from their credit appraisal, monitoring and recovery processes) also needs to be assessed. Further, as the banking industry has a significant stake in the ownership of most of the ARCs presently functioning in India, the spread of risks may not be taking place effectively.

3.30 Apart from the focus on asset reconstruction, effectiveness of various measures to improve the asset quality of banks will also depend on the efficient functioning of the corporate debt restructuring (CDR) mechanism and debt recovery tribunals (DRTs). There is a need to monitor the efficacy of the processes at 'entry', 'restructuring' and 'exit' stages of restructuring proposals, under a robust framework of accountability of different agencies and stakeholders involved. The incremental number of cases and amount of debt approved to be taken under the CDR mechanism

Chart 3.6: Performance Parameters of ARCs

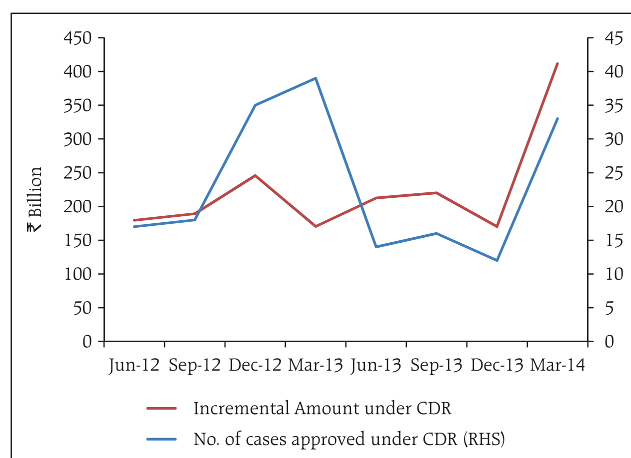


Source: RBI Supervisory Returns.

during a quarter has continued to show an increasing trend since the December 2013 quarter (Chart 3.7).

3.31 Measures to improve factoring and management of large credit will help mitigate problems at both ends of the spectrum, *i.e.*, small and medium enterprises (SMEs) and large corporations. The Factoring Regulation Act, 2011 is expected to help SMEs maintain their cash flows by factoring their receivables though it may need some push from banks to engage with this sector as large customers obtain low cost working capital and overdraft facilities that obviate the need for factoring services. In addition, the setting up of the Central Repository of Information on Large Credits (CRILC) for disseminating credit data and establishing a joint lenders forum for stressed assets followed up by a corrective action plan will help in the timely resolution of stressed assets by banks.

Chart 3.7: Trend in Quarterly Incremental Number of Cases and Amounts under CDR Cell



Source: CDR Cell.

Securities Market

Asset Managers as Source of Systemic Risk

3.32 The asset management industry has been identified as a potential source of systemic risk in some regulatory jurisdictions. Key factors that make the industry vulnerable to shocks are: 'reaching for yield' and 'herd behaviour', redemption risk in collective investment vehicles and leverage, which can amplify asset price movements and increase the potential for fire sales.

3.33 In the context of Indian securities markets, the asset managers are mutual funds, portfolio managers and alternative investment funds. The assets under management (AUM) to GDP ratio of portfolio managers was 6.8 per cent in 2013-14 while that of the mutual fund industry was 7.3 per cent. This is significantly lower as compared to the global average at around 38 per cent in FY 2013[23]. The Indian scenario with respect to the three main vulnerabilities has been examined by SEBI to investigate systemic risks, if any, under the prevailing regulatory framework (Box 3.3).

Box 3.3: Risk Management Framework for Asset Managers in India

Asset management is an 'agency' activity wherein asset managers manage investors' assets on their behalf. In return investors pay fees to the asset managers, wherein the profit and losses accrue to the investors and not to the asset management company, thus limiting the systemic risk faced by the asset management industry.

The risk management framework specified by SEBI for the asset management industry is significantly conservative and has weathered many instances of market volatility, disruptions and shocks. The size of the segment is also very small as compared to FIIs. The asset management industry in its present form does not appear to be a source of systemic risk although the focus of the present public policy debate needs to centre around the implications of asset management activity in amplifying pro-cyclical swings in the financial system and the wider economy.

(Contd...)

[23] US had the highest AUM/GDP ratio of 83 per cent followed by Brazil (45 per cent) and the European Union (41 per cent).

(...Concld.)

Apart from mutual funds and portfolio managers, the only other category of asset managers under SEBI's jurisdiction is alternative investment funds (AIFs). As the assets under the aegis of AIFs are miniscule (in absolute terms and as ratio to GDP) as compared to those of mutual funds and portfolio management services, they do not pose a concern at this stage.

In the Indian context, risk management regulations prescribed for mutual funds and portfolio managers are intended to ensure that investments conform to the mandates and that credit quality, asset concentrations and other issues are appropriately managed. Funds are required for disclosing information to investors about the risks, portfolio holdings, concentrations and investment strategies. SEBI has also specified operational, prudential and reporting norms for AIFs.

Redemption risk in funds like mutual funds that offer unlimited redemption rights is taken care of by adopting a principle of fair valuation (that ensures that the valuation of securities is reflective of its realisable value), by charging exit load (that shall limit redemption), by borrowing to a certain extent against a scheme's asset to meet redemption requirements and through the liquid assets held by the scheme. There is no concept of redemption in portfolio management services, since the portfolio manager is simply managing a client's funds/ securities in his/her own account as per a separate agreement with each client. Mutual funds are subject to borrowing restrictions and prohibited from lending. MFs are not allowed to borrow to invest in securities. The gross exposure of the MF scheme through equity, debt and the derivative positions and other assets, cannot exceed the scheme's net assets. Furthermore, short selling of securities is not allowed for mutual funds except under the stringent framework specified by SEBI. Mutual fund investments in derivatives are also subject to position limits and linked to their holding of securities and other instruments. Portfolio managers are not permitted to borrow or lend and are also not allowed to leverage with respect to their derivative transactions, that is, the total exposure of the portfolio client in derivatives should not exceed his portfolio funds placed with the portfolio manager.

Reducing Reliance on Credit Rating Agencies

3.34 One of the regulatory reforms undertaken by FSB is aimed at reducing the reliance on credit rating agencies (CRAs). FSB had drawn up three principles and 12 sub-principles to reduce a mechanistic reliance on CRA ratings in standards, laws and regulations[24]. In India, SEBI is coordinating the process of assessing India's compliance/position *vis-a-vis* the FSB principles. It has been observed that though there were references to the use of CRA ratings in the regulations, financial institutions are required to do their own due diligence prior to investments as specified in the regulations. There are requirements of adequate disclosures by issuer companies which help investors to take well informed investment decisions. The ratings serve as a supplementary input for risk assessment and hence there is no mechanistic reliance on ratings by the institutions.

Resilience of Capital Market Infrastructure

3.35 At the instance of SEBI, stress tests were carried out by the three clearing corporations in the securities market to test the resilience of the financial market infrastructure (FMI) *vis-a-vis* political and economic uncertainties. Based on the assumption of worst case scenario (movement of 20 per cent in indices in both directions) and offset of the stressed value against the actual margins collected/available on those dates, the stress tests showed that these FMIs had sufficient resources to cover the resultant losses.

[24] FSB (2010), "Principles for Reducing Reliance on CRA Ratings", October 27, 2010.

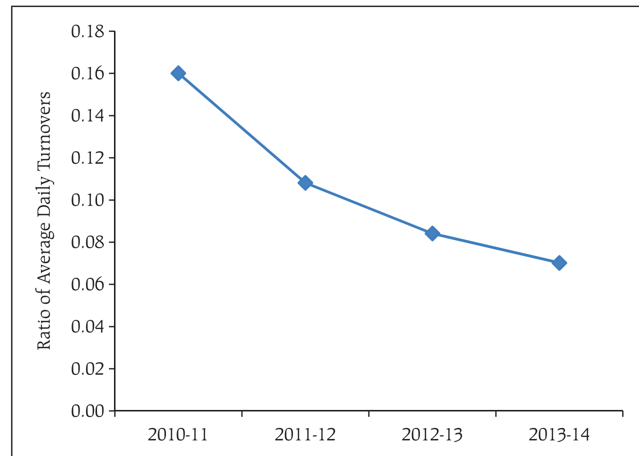
3.36 Also, as a proactive measure to meet any liquidity crisis situation (similar to those experienced in 2008 and 2013), SEBI has put up a contingency plan which includes increasing the borrowing limit of mutual fund schemes and arranging a special re-finance window by the Reserve Bank. For foreign institutional investors (FIIs), an action plan (with the use of market wide circuit breakers, margin requirements and adjustment of position limits in case of derivatives) has been envisaged for dealing with a crisis situation which may arise from uneven political and economic conditions, a fall in sovereign rating or a market crash.

Cash Market Turnover *vis-a-vis* Derivatives Market Turnover in Equity

3.37 India's stock market has witnessed a strong growth in market capitalisation over the last two decades. However, in recent years, the growth in turnover in the cash (spot) market has not kept pace with that in the derivative market as is evident in a declining ratio of average daily turnover in the cash and derivatives markets (Chart 3.8). Since excess or disproportionately high activity in the derivatives market may influence the price formation in the cash market, there is a need to monitor the trends and take necessary steps to ensure robust liquidity in the cash segment as well as in the derivatives segment. Specifically, there is a need to address any anomaly in relative transaction costs in the two segments, including a review of the existing provisions of the securities transaction tax (STT) as applicable for different segments and instruments.

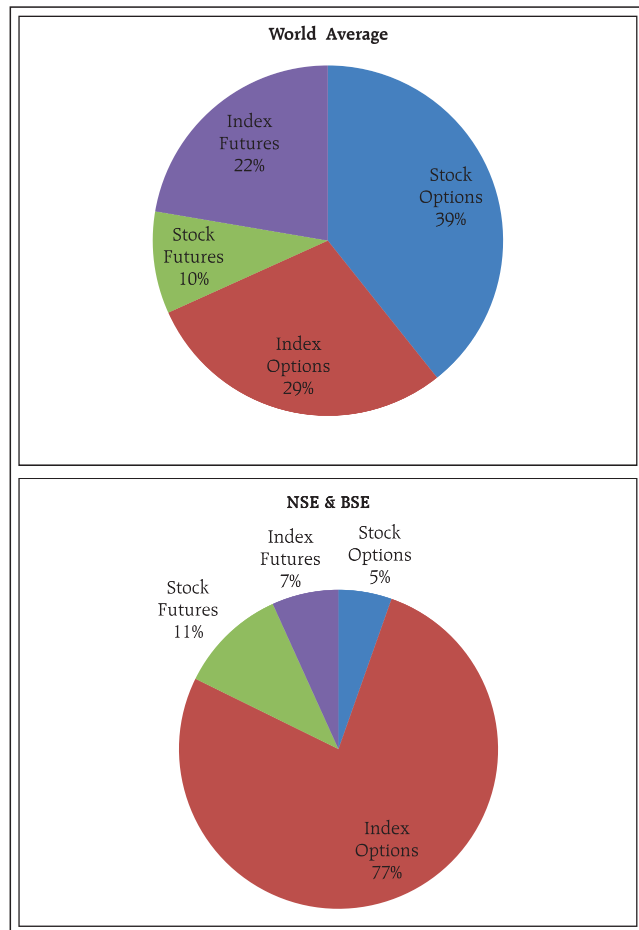
3.38 Within the derivatives segment, index based products, especially index options, account for a significantly large share of the total volumes in Indian equity markets. In 2013, at the two major Indian bourses, options contracts had a share of nearly 82 per cent in the volume of exchange traded derivatives, compared to around 68 per cent worldwide (Chart 3.9). As compared to global markets, Indian markets have seen relatively higher volumes

Chart 3.8: Ratio of Average Daily Turnovers (Cash Markets to Derivatives Markets)



Source: SEBI Staff Calculations.

Chart 3.9: Product Share in Volumes of Exchange Traded Derivatives



Source: SEBI Staff Calculations.

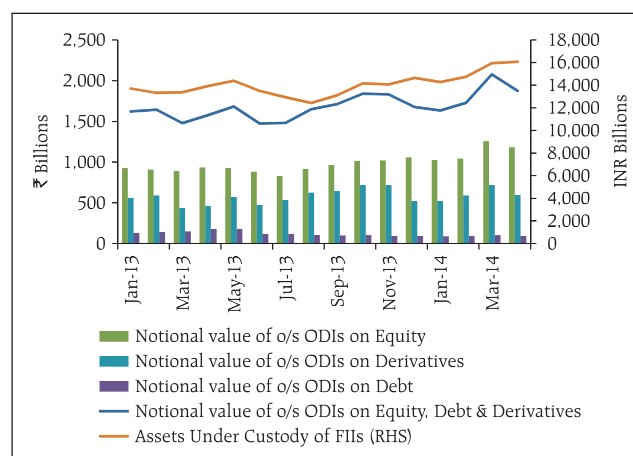
in index options over stock options and index futures. Although option contracts have an asymmetrical pay-off, this substitution is not seen to be a cause for concern by itself. The faster growth in trading volumes in options may be resulting from an effectively lower incidence of STT on option contracts, relative to futures contracts, as it is applied on the 'option premium' and not the 'strike price'.

Offshore Derivatives in Indian Equity Markets

3.39 Offshore derivatives instruments (ODIs), including promissory notes (PNs), are issued by registered FIIs, through which overseas investors get exposure in Indian equities or equity derivatives, subject to the condition that such investors are regulated by an appropriate foreign regulatory authority under appropriate 'know your client' (KYC) norms. The percentage ratio of outstanding ODIs/PNs to total assets under custody (AUCs) has shown an upward movement as compared to the last financial year (Chart 3.10).

3.40 The build-up of ODI positions and the concentrations therein (concentration of entities holding ODIs, concentration of stocks underlying or geographical concentrations in holding of ODIs) may be of systemic concern since any major and sudden unwinding of these positions triggered by a local/ global event may mirror in the offloading by FIIs in Indian equity markets. It is envisaged that under the erstwhile FII regime, some entities might have been investing through ODIs since they could not get themselves registered as FII/sub-accounts, a prerequisite for making investments directly under the FII regime. Under the revised framework notified by SEBI[25], the FII regime will be replaced by the foreign portfolio investors (FPI) regime and is expected to encourage overseas investors to enter the Indian market directly by registering with designated depository participants rather than investing via offshore derivative instruments. Under the FPI regime, category I and category II FPIs (except for unregulated broad based funds) can issue, subscribe to or otherwise deal in offshore derivative instruments (ODIs), directly or indirectly subject to certain conditions relating to regulation by an appropriate foreign regulatory authority and KYC norms. All category III FPI and unregulated broad based funds, classified as category II FPI (by virtue of their investment manager being appropriately regulated) are prohibited from issuing, subscribing or otherwise dealing in ODIs directly or indirectly.

Chart 3.10: Trends in Off Shore Derivative Instruments in Indian Equity Markets



Source: SEBI.

Commodities Derivatives Market

Corporate Governance and Warehousing Issues in the Commodity Derivatives Market

3.41 The national spot exchange crisis (covered in the last FSR) highlighted the need for strengthening regulation and corporate governance practices in financial market infrastructure institutions. The Forward Markets Commission (FMC), the regulator agency for the commodity derivatives markets in India, has reviewed corporate governance norms at the national commodity exchanges and has taken steps to diversify their ownership structure and attract more institutional investors.

[25] SEBI (2014), "SEBI (Foreign Portfolio Investors) Regulations", January 7, 2014.

3.42 Guidelines for the shareholding structure in commodity exchanges have been revised. At least 51 per cent of the paid up equity share capital of a recognised commodity exchange shall now be held by the public; individual shareholdings have been capped at 5 per cent of the paid up equity share capital of a recognised commodity exchange except financial institutions such as a commodity exchange, stock exchange, depository, a banking company, an insurance company and a public financial institution which can hold up to 15 per cent of the paid up equity share capital. The exchanges and their boards have been tasked with setting up risk management committees for identifying, measuring and monitoring the risk profile of the exchange and have been directed to lay down policies for disclosures with regard to expenditure on certain items such as donations and related party transactions.

3.43 In order to strengthen the monitoring, supervision and quality of the warehouses which form a critical component of financial infrastructure in the commodity derivatives market, FMC has directed the commodity exchanges to ensure that all the existing warehouses accredited by them are registered by the Warehousing Development and Regulatory Authority (WDRA) and have obtained a certificate of accreditation from it.

Financial Safety Net – Deposit Insurance

Need for a Target Fund by a Deposit Insurer for Financial Stability

3.44 In view of the important role of a deposit insurance agency, setting and maintaining a suitable target level for the quantum of funding is required to ensure that there are adequate funds available in contingencies. The sources of funds are premiums collected from member institutions and the returns earned by investing these funds. Internationally, many deposit insurers follow the practice of setting and maintaining a target fund wherein a pre-determined or targeted ratio of the 'amount of ex ante deposit insurance fund' to 'insured deposits' is set and maintained. The guidelines issued by the International Association of Deposit Insurers (IADI) on appropriate methodologies for determining the optimum quantum of funds include utilising existing knowledge in evaluating financial reserves sufficiency on the basis of a risk analysis.

3.45 Many of the deposit insurers maintain this ratio at up to 2 per cent though some of the countries go up to 5 per cent. In case of the Deposit Insurance and Credit Guarantee Corporation (DICGC), the reserve ratio (deposit insurance fund/insured deposits) stood at 1.7 per cent at end-March 2013. While, so far there is no targeted level of the reserve ratio for DICGC, it would be desirable to set a target ratio based on a detailed assessment of the risk.

Insurance Sector

Lending Activity of Insurance Companies

3.46 The Insurance Act, 1938, defines the various ways in which insurance companies can deploy their funds, which includes various kinds of loans (for example, loans against policies and loans against mortgage of property in India and abroad). Related regulations lay out the exposure/prudential norms in debts/loans and the provisions for considering some types of loans to be covered under 'other investments'.

3.47 The lending activity of insurance companies - mainly the life insurance companies, while not very large in comparison to total banking sector lending, is nevertheless significant. The quantum of lending by insurance companies which stood at ₹888.7 billion as at end-March 2014, constitutes less than 5 per cent of the assets under management (₹20,990 billion as at end-March 2014) of insurance companies and a significant portion of these loans is secured against the surrender values of life insurance policies. While risk management framework and exposure limits (single issuer, group, and industry) are in place for insurance companies, there is a need to plug the possibility of any regulatory arbitrage by closely

aligning the practices and regulations applicable to lending by insurance companies with those by banks. A coordinated approach and sharing of information, being facilitated by FSDC, will enhance the efficiency of monitoring of exposure details of large borrowers and functioning of the Joint Lending Forum, under the Reserve Bank's framework for revitalising stressed assets.

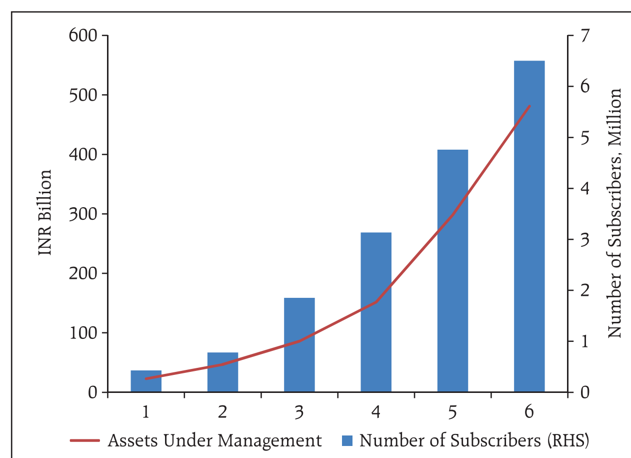
Pension Sector

3.48 The importance of pension funds lies not only in promoting old age security but also in ensuring financial stability in multiple ways. Although pension funds are termed 'passive investors' (because portfolio churning is low) due to their 'buy and hold' strategy with a sizeable presence they can ensure market stability by acting as a countervailing power in the face of large scale sell-offs. Pension funds being large shareholders with a long-term investment strategy tend to play an important role in bringing in the best practices of corporate governance in companies that get the investments. Also, permitting pension funds to invest in equity/debt instruments can play a dual role in not only providing better returns to their constituents but, at the same time, also in developing the capital market. Pension funds can be major stimulators of financial innovation as suggested by international experience.

3.49 Given India's huge population and a pension coverage of barely 12 per cent, India's potential pension ecosystem is enormous and is growing rapidly. Currently, one end of the spectrum is the defined benefit (DB) pension schemes of which the two main schemes are the pre-reform civil services pension scheme of the central/state governments (which has been replaced by the National Pension System for new recruits) and the 'organised sector' social security scheme operationalised by the Employees' Provident Fund Organisation (EPFO). At the other end of the spectrum are the defined contribution (DC) schemes of which the National Pension System (NPS) introduced from January 2004 is the most important addition to the Indian pension sector. In the case of several DB schemes both currently under implementation and newly announced ones (mostly in the government sector), lack of liability computation especially in a world of rising life expectancy can be a potential source of fiscal stress in years when there are large payouts. Continued reliance on unsustainable pay-as-you-go pension schemes in the government has the potential of having an adverse impact on financial stability by raising fiscal deficit.

3.50 Keeping subscriber interest as prime, several initiatives like allowing withdrawals on specific eventualities to make the NPS more subscriber friendly, selection of pension fund managers (PFMs) and price discovery of investment management fees through competitive bidding and appointing the 2nd CRA are some of the measures that have been undertaken recently. Further, as mandated by the Pension Fund Regulatory and Development Authority (PFRDA) Act, 2013, developing a minimum guarantee pension product is also underway. These and other initiatives are aimed at speeding the coverage of NPS for achieving the goal of 'universal old age pension security in India'. The NPS has seen substantial growth in terms of number of subscribers and AUM (Chart 3.11).

Chart 3.11: Trends in Y-o-Y Growth in Subscription and AUM under National Pension System



Source: PFRDA.

3.51 However, the corpus of assets under NPS' management does not pose systemic concerns at present, as it is still in its accumulation stage and extreme fluctuations are likely to even out over the long-term duration of the corpus. Given the diversified nature of the portfolio, the pension fund sector is unlikely to be impacted severely by volatility in the financial markets.

Financial Market Infrastructure

Cost-Benefit Analysis of Single CCP *vis-a-vis* Multiple CCPs

3.52 The central counterparties (CCPs) as financial market infrastructure (FMI), have become critical nodes in the financial system. The failure of a CCP could contribute to systemic risk which could further exacerbate on account of interconnectedness. Therefore, the effectiveness of a CCP's risk management and the adequacy of its financial resources are critical aspects of the infrastructure of the markets that it serves. Assisted by a regulatory push, more and more OTC derivative products are moving to CCP clearing. Although a CCP helps to reduce risks to market participants significantly, it also concentrates risks on itself. As CCP clearing has its own associated costs, individual markets need to assess the benefits and costs of a CCP clearing based on the volume and value of transactions, trading patterns among counterparties and the opportunity costs associated with settlement liquidity.

Concentration Risks Associated with Single CCP

3.53 The Clearing Corporation of India Limited (CCIL) operates in the markets regulated by the Reserve Bank which include the government securities segment, collateralised borrowing and lending obligations (CBLOs), and the USD-INR forex and forex forward segments. In terms of value, CCIL handles close to around 80 per cent of the total market volumes of all CCPs put together. Previous issues of FSR have indicated that CCIL could be a source of concentration of counterparty risk in the Indian system, given that it is a multi-product CCP, with the same set of participants operating in different market segments. The FSRs highlighted the need for adopting high risk management standards consistent with international best practices and effective regulatory oversight for minimising the concentration risk. The Reserve Bank has been aiming at achieving an optimal CCP structure to address the concentration risk, while also ensuring the cost-effectiveness of central clearing. In this context, the need for a second CCP in markets regulated by the Reserve Bank has been examined in detail.

Optimal Composition of a CCP Structure for India

3.54 International experience on optimal structure and number of CCPs, does not throw up a single clear solution suitable for all situations as there are many parameters like the level of funding available to the CCP(s), the degree of integration between different groups of participants with specific risk profiles and the overall financial system. In some of the advanced jurisdictions, market participants have flexibility to settle through international CCPs if such products are available with the international CCPs. Also, with multiple CCPs operating in some markets, interoperability and cross margining are resorted to for enhancing netting benefits. With existing capital account restrictions and domestic orientation of clearing and settlement infrastructure, India could not be strictly compared with such jurisdictions. However, an analysis of the optimal number of CCPs for markets regulated by the Reserve Bank was undertaken based on the international experience and prevalent market conditions in India (Box 3.4).

Present System of CCPs Seen as Effective in the Indian Context

3.55 The question of the optimal CCP set-up for a market like India is complex and will depend on a trade-off between efficiency in a single CCP structure and the potential of systemic risk that could arise from the failure of a single CCP. Another trade-off

Box 3.4: Relative Merits of Single CCP and Multiple CCP Structures

Assuming that there is merit in having multiple (at least two) CCPs, the CCP infrastructure can be possibly organised under the following two options:

I. *Model A: Vertical splitting: Both the CCPs cater to the same markets*

Both the CCPs would operate in both the cash and derivatives segments and would compete with each other. Market participants would participate in either of the CCP based on operational and economic considerations.

II. *Model B: Horizontal splitting: Both the CCPs cater to different markets*

In this arrangement one CCP could cater to the cash segment *viz.* government securities including repo, the money market, CBLO and the forex segment and other CCP could cater to the derivatives market, both forex and interest rate (forex forward and IRS). Since they will cater to different market segments, there will be no competition and will in all probability have the same set of participants. The analysis was based on several parameters – implication on netting of settlement value and liquidity requirement, impact on counterparty risk exposures in terms of net mark-to-market (MTM) and potential future exposures, impact on systematic risk (operational risk, too-big-to-fail and market failures), cost effectiveness (both market participants and CCPs) and competition and innovation.

- From the empirical analysis (on the 31 January 2014 position) undertaken for implications on netting and implications on current and potential future exposures it is observed that the two CCPs structure under Model A reduces the netting benefits compared to a single CCP model and thereby leads to increase in liquidity requirements, overall MTM exposures and potential future exposures (PFE) for the markets. However, a significant impact is not noticed for the two CCPs structure under Model B when compared to the single CCP model on account of cross margining and netting of exposures across segments not being permitted under the extant regulatory framework. Further, the analysis does not take into account the impact of increased collateral requirements under Model B.
- The two CCPs structure has advantage over the single CCP structure in minimising systemic risk. However, it is difficult to empirically derive the cost of the systemic risk in a single CCP structure. On the other hand, there are measures to address systemic risk in a single CCP structure through a combination of measures such as adopting an effective risk management, augmenting financial resources to address defaults, an effective business continuity plan (BCP)/disaster recovery (DR) arrangements with high redundancies and high availability and effective oversight by the regulators.
- From the perspective of CCP participants, a single CCP structure promotes high network externalities in terms of economies of scale in transaction costs, higher ratio of multilateral netting, reduction in exposure (due to a high netting ratio and a large number of participants) and reduction in the risk mutualisation cost (incremental contributions to the default fund would come down). Network externalities are generally low in a multi CCPs structure. Network externalities in multiple CCPs could be improved through links and interoperability between the two CCPs, although they have associated cost and risk implications also if they are not properly implemented.

would be between the maximum netting ratio achieved by the single CCP solution and the concentration of risk in a single infrastructure. The size of the markets is not big enough for an additional CCP to be self- sustaining. Further, while the costs and the overall collateral requirement will increase under the two CCPs model, the benefits expected to accrue from competition and innovation could be at least partially achieved under the single CCP model through involvement of user groups in decision making, improving corporate governance and introducing regulatory driven products. In view of the findings of the analysis, it is observed that at present the single CCP structure in India is offering users the benefits of economies of scale and efficiency in collateral and capital usage. The Reserve Bank,

however, will need to continuously monitor the situation according to the evolving needs of financial markets and avoid the possibility of potential abuse of the dominant position as well as systemic risks associated with such a structure.

3.56 Considering the urgent need for bringing out legal provisions to provide for netting and settlement finality in the event of insolvency, liquidation or resolution of the CCPs itself, certain legal reforms are being considered by the government. This will help banks in economising on capital by moving to the CCP clearings being offered by the CCIL and facilitate greater participation by banks in forex and interest rate derivatives markets and also facilitate conformity by Indian financial markets with globally accepted principles.

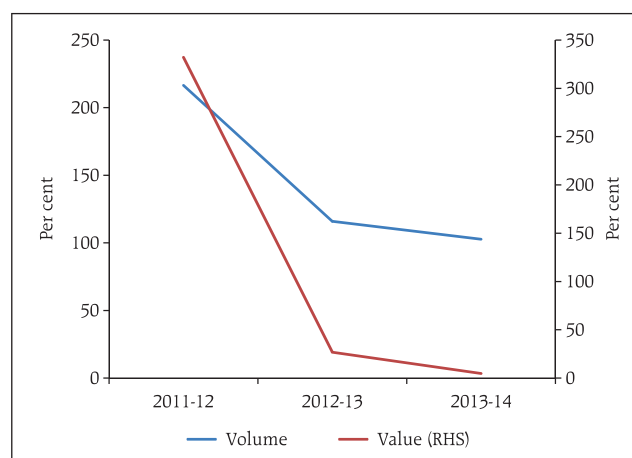
Payment and Settlement Systems

3.57 The payment and settlement systems continued to perform efficiently as efforts are on to make them more secure, accessible and inclusive. The Reserve Bank's policy in this regard is geared towards addressing the risks in the system, adhering to international standards and addressing the issue of exclusion from access by making payment products affordable, safe and efficient.

Developments in Pre-Paid Payment Instruments

3.58 In India, banks as well as non-banks are allowed to issue pre-paid payment instruments (PPIs). PPIs, as a financial product, are being used to provide limited banking services such as remittance and payment services to the unbanked population. The Reserve Bank, in consultation with all the stakeholders, carried out a comprehensive review of the guidelines for issuing and operating PPIs issued in 2009. The

Chart 3.12: Annual Growth in Volume and Value of PPIs



Source: RBI.

revised guidelines were issued in March 2014 with the major changes relating to enhancing capital and net-worth requirements for new PPI issuers; need for clarity related to the credits and debits that can be made to/from escrow accounts and forfeiting processes; requirement of immediate credit on account of failed/returned/rejected transactions and mandatory and more frequent (at least on quarterly basis) reporting of incidences of fraud involving PPIs.

3.59 The annual growth rate in volume and value of transactions under the PPI channel has decreased over the last two years especially in value terms (Chart 3.12). Although the growth rates in volume appear robust, the segment has shown a lower than expected level of growth performance. Some of the plausible reasons behind the limited usage of these products could be related to lack of 'acceptance' infrastructure and restrictions on 'cash out'. The PPI segment at present dominated by paper coupons/meal schemes with limited usage, has the potential to reach unbanked people who are not able to access formal banking services.