

Chapter III

Financial Sector Regulation

This Chapter is divided into two parts. Part – I sets the tone under the broad theme of “Enabling Regulations for Market Access and Financial Stability”. Part-II deals with various stability and developmental issues related to financial sector regulation.

Part I

Enabling Regulations for Market Access and Financial Stability

Positioning the regulatory stance amidst the need for healthy innovation and financial inclusion, remains the main challenge for India’s financial sector regulation. While the underpinnings of financial market regulation need to recognise that financial markets are inherently risky, the approach to regulatory interventions needs to be in tune with the developments on the ground.

The broad theme of “Enabling Regulations for Market Access and Financial Stability” envisions a balanced, predictable, institution-neutral, ownership-neutral and technology-neutral regulatory regime for India’s financial system, wherein financial market participants are not discouraged to take risks, as long as those risks are required, sufficiently acknowledged and provided buffers for.

3.i A lax approach to financial sector regulation in developed financial markets was recognised as one of the major contributing factors which eventually led to the global financial crisis (GFC). While the 'global' crisis resulted in the need for a 'coordinated' and 'harmonised' regulatory response under the aegis of G20, the wide range of regulatory reforms were primarily aimed at addressing the shortcomings observed in the regulatory approach in jurisdictions with relatively more advanced financial system. Thus advanced economies (AEs) needed to look into the extant regulatory practices to address the excesses committed by the 'industry', mainly the big financial institutions driving the international financial markets.

3.ii In the process, the emerging market and developing economies (EMDEs) have had to contend with regulatory practices that were too complex but formed part of the global agenda, to serve the need for 'consistency' in formulation and implementation of such reforms, even as the suitability of some of the global regulatory reforms for the EMDEs is

still being discussed. While it is important for the EMDEs to learn from the mistakes of others, they need much simpler regulatory approaches given their not so complex financial systems and also in view of the need to expand and extend the coverage and reach of the financial system in the prevailing levels of under-penetration of the financial services.

3.iii While allowing them to thrive, regulation needs to keep a watch on the markets and evolve with time by continuously learning and updating the skill sets. However, regulation also has a cost as do the 'market failures' and resulting crises. While assessing the cost impact on the system of a specific regulation is complex, measuring the benefits of regulation is equally challenging. Therefore, while the 'non-occurrence' of crises may indicate that the regulation was able to avoid 'excesses', it cannot be an adequate indicator for establishing its effectiveness, especially considering its potential impact on innovation. The inherent fallacy and 'survival bias' ingrained in such conclusions may compromise the need for a real paradigm shift in the approach to regulation.

3.iv While innovation influences regulation, regulation too affects innovation, both positively and negatively. The 'compliance innovation' occurs when the scope of the regulation is broad and the resulting innovation remains within the scope of regulation. On the other hand, the 'circumventive innovation' occurs when the scope is narrow and the resulting innovation allows regulated entities to move out of the regulatory perimeter.¹ For example, as observed in the Indian context in the recent past, certain financial sector entities changed their organisational form to avoid being covered by relatively stricter regulations for entities that raise deposits from the public. An appropriate regulatory stance in such circumstances could be minimising the cost of compliance for those who are willing to comply while making it more difficult and costlier for those who want to circumvent the regulation.

3.v Any new regulation, which may generally be preceded by some degree of uncertainty may work through three dimensions: stringency, flexibility and information. While 'stringency' of regulation denotes the degree of change in the compliance burden, 'flexibility' refers to the authority structure of the regulation ('command' and 'control' regulations versus 'incentives based' regulation) and the 'information' dimension of regulation points to the degree by which new regulations promote complete information or whether they induce more uncertainty. An effective regulatory approach should ultimately result in strengthening market access and market functioning, which build on and encourage innovation.^{1*}

3.vi Considering that risk taking is inherent and essential in financial markets, the current Indian regulatory stance envisions a *balanced, predictable, institution-neutral, ownership-neutral*

and technology-neutral regulatory regime for the entire financial system, wherein banks and other financial intermediaries are not discouraged to take risks as long as those risks are required, sufficiently acknowledged and provided buffers for. This stance also envisages a push towards being more proactive in identifying risks and once identified, being prompt about taking steps in mitigating and managing those risks. The next question in this context relates to the desirable pace of effecting regulatory changes; whether it should be through 'big bang' reforms that may come with major market disruptions or approaching the goal through a gradual, less disruptive 'moving target' strategy.

3.vii The move towards risk based supervision (RBS) with more granular and credible data collection processes will help in the optimal use of scarce supervisory resources. However, even RBS cannot be expected to track all the risks which hide and reside beyond and between the gaps in data and rules. A supervisory approach not constrained by rules should ideally cover a comprehensive oversight of regulated institutions for ensuring that they effectively manage their own risks regardless of whether or not those risks are covered by prudential rules or standards. Thus, the focus needs to be on an 'expert' rather than a 'legal' model of regulation. As regulatory agencies start from a pre-existing view or regulatory goal, the initial regulatory stance is based on past practices, habits and cultural norms. This, in turn, determines the nature of regulatory activities that are undertaken. In an alternative approach, regulators design their regulatory interventions through which they first identify and define the key risk issues and then target regulatory interventions around those issues rather than automatically following a standard supervisory process.²

^{1 & 1*} Stewart, Luke A. (2010), 'The Impact of regulation on Innovation in the United States: A Cross-Industry Literature Review', paper commissioned by the Institute of Medicine Committee on Patient Safety and Health IT, June. Available at: <https://www.iom.edu/~media/Files/Report%20Files/2011/Health-IT/Commissioned-paper-Impact-of-Regulation-on-Innovation.pdf>.

² Sparrow, Malcolm K. (2014), 'What Does It Mean to be a Risk-based Regulator?' Beyond Finance—Financial Supervision in the 21st Century, *Dutch National Bank Occasional Series*, March. Available at: www.vic.ipaa.org.au/document/item/2784.

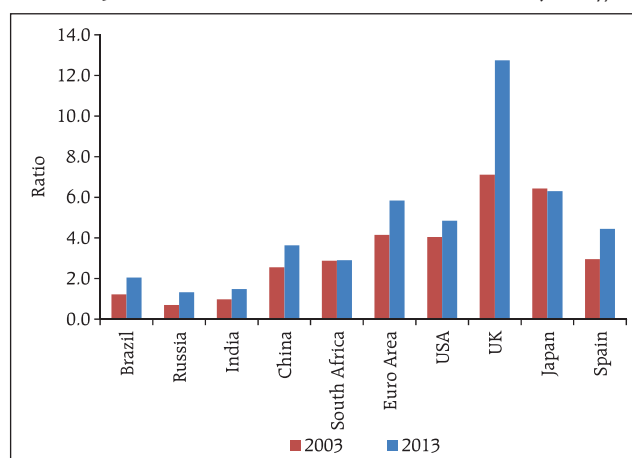
Role of financial sector in economic growth

3.viii The issues relating to the desirable approach to regulation, rate of growth and innovation in the financial sector need to be addressed in the context of its *raison d'être* of supporting real sector economic growth and development. A more developed financial sector is expected to be more efficient in allocating resources and thereby promoting economic development. The causation also works in the reverse direction, as economic growth itself generates demand for financial services and spurs financial sector development.

3.ix Even as the potential role of the financial sector in growth is well appreciated, it may be misleading to conclude that unbridled financial sector growth and development will continue to support economic growth in a positive monotonic way.³ The positive effect on economic growth begins to decline beyond a certain level of financial development while costs in terms of economic and financial volatility begin to rise.⁴ As India may yet be far from that threshold level of financial development (Chart 3.i), where diminishing returns start to set in, the approach to regulation may need to be suitably tailored. On the other hand, fundamental discipline and sound credit culture need to be protected and cannot be sacrificed at the altar of short term targets of growth, as a more credible and strong financial system will aid in promoting more sustainable growth in the long run.

3.x The underpinnings of financial market regulation, hence, need to be based on the understanding that markets are inherently *unstable* and that prudential regulations have their limitations. As markets are known and have proved to be 'imperfect', effective regulation may help to a

Chart 3.i: Ratio of total financial sector assets to GDP (in US\$)



Source: Global Shadow Banking Monitoring Report 2014.

large extent in addressing some such imperfections arising from an informational asymmetry. Regulation should thus aim to promote the market mechanism while also ensuring that the outcome of the market-play remains aligned with the broader goals of maximising efficiency for all stakeholders.

The bottom line

3.xi As it has now been acknowledged internationally that the regulatory environment needs to vary with the cycle, this approach towards a *balanced and predictable regulatory regime* will be informed by the structure and current state of financial sector development, the depth and breadth of financial markets, phases of economic and credit cycles and immediate domestic priorities. Accordingly, there is a need to design 'cycle-proof' regulations aimed at creating stability through the cycle. For this, regulations should be comprehensive, contingent and cost effective.⁵ These aspects with a background of some recent developments on the regulatory and supervisory fronts form the narrative of part II of this chapter.

³ Sahay et al. (2015), 'Rethinking Financial Deepening: Stability and Growth in Emerging Markets', *IMF SDN/15/08*, International Monetary Fund, May.

⁴ Cecchetti, S.G. and E. Kharroubi (2015), 'Why does financial sector growth crowd out real economic growth', Monetary and Economic Department, *BIS Working Papers* No. 490, February. Available at: <http://www.bis.org/publ/work490.pdf>.

⁵ Rajan, Raghuram G. (2009), 'The Credit Crisis and Cycle-proof Regulation', *Federal Reserve Bank of St. Louis Review*, September/October 2009, 91 (5, Part 1), pp. 397-402. © 2009, The Federal Reserve Bank of St. Louis. Available at: <https://research.stlouisfed.org/publications/review/09/09/part1/Rajan.pdf>.

Part II

Financial Sector in India – Regulation and Development

The financial sector regulatory reforms in India are being driven by the domestic priorities, within the spirit of the global regulatory standards, even as the challenges in uniform implementation of the reforms are coming to the fore, in many jurisdictions.

While the regulatory move towards encouraging greater market access and market discipline will help the development of domestic financial markets, the issues related to asset quality and capital levels of public sector banks (PSBs) call for greater attention by various stakeholders, notwithstanding the regulatory intent towards incentivising early recognition of the weaknesses and prompt joint action.

The concerns emanating from rapid rise in algorithmic and high frequency trading in recent years highlight the need for caution for India's securities markets, even as significant steps have been taken with regard to move towards risk based supervision, preventing and dealing with illegal money-raising activities and insider trading.

Agricultural insurance needs urgent focus in the wake of frequent episodes of weather related calamities and their impact on small and marginal farmers. There is a need for harmonising the regulation of the physical commodities market and strengthening the linkages between the derivatives markets and physical (cash) markets, mainly in agricultural commodities.

The expected shifts in demography in coming decades call for attention to old age income security. The Atal Pension Yojana (APY) operationalised by the Government, is expected to strengthen the social security for the large working population in unorganised sector.

Developments in international regulations

3.1 With the near completion of the formulation⁶ and standard-setting stages of the post-crisis international financial regulatory reforms agenda, the focus has now firmly shifted to full, consistent and prompt implementation of reforms that were agreed upon. With a view to addressing new risks and vulnerabilities, work programmes have been outlined by the Financial Stability Board (FSB) to address financial stability risks stemming from market-based finance including those associated with asset management activities and addressing misconduct risks and withdrawal from correspondent banking.

Progress in the implementation of the international regulatory reforms agenda

3.2 India's record on adopting the international regulatory reforms and standards for banking capital

and liquidity regulation has been consistent and in some aspects Reserve Bank's regulatory framework (including higher minimum capital ratios and higher risk weightings for certain types of exposures) has been observed to be even more conservative than the Basel framework. The recently published assessment reports by Basel Committee on Banking Supervision (BCBS), on the implementation of the Basel risk-based capital framework and the Liquidity Coverage Ratio (LCR) for India as part of the ongoing Regulatory Consistency Assessment Program (RCAP) for its member jurisdictions has rated the standards adopted by the Reserve Bank with regard to risk-based capital requirements as 'compliant' with the minimum Basel capital standards. Each of the 14 components of the Basel capital framework included in the assessment has been assessed as 'compliant'.

⁶ With the finalisation of the rules for the net stable funding ratio (NSFR) by BIS in late 2014 the formulation of regulation with regard to the capital, leverage and liquidity framework for banks has been completed.

Implications of uneven progress in implementation across jurisdictions

3.3 However, as had been broadly anticipated and also mentioned in previous Financial Stability Reports (FSRs), progress on the implementation of the agenda has been uneven and varied with respect to different reforms in different jurisdictions guided by different national priorities. Even as implementation in several key areas of globally agreed reforms and standards requires significant movement forward, regulators—both collectively at the global level as well as independently at the national levels—face new challenges for fulfilling the aspirations of growth, equity and stability of domestic economies amidst growing complexities and uncertainties related to the global economic and financial environment.

3.4 In this regard, an important consideration for regulators in EMDEs like India is that even with increasingly integrated financial markets and notwithstanding the progress made on international co-operation on regulation and policymaking under G-20, regulators and policymakers in many jurisdictions, mainly in the advanced economies (AEs), have been observed to focus on the needs of domestic growth and stability. While the pursuit for even greater international co-operation and co-ordination should continue, domestic regulation will need to address the challenges arising from spill-over effects of stresses and strains resulting from volatility and other events, as also the priorities for financial sector regulation specific to the national context within the spirit of the internationally agreed upon regulatory standards.

Regulatory and developmental issues in the Indian financial system

Banking sector

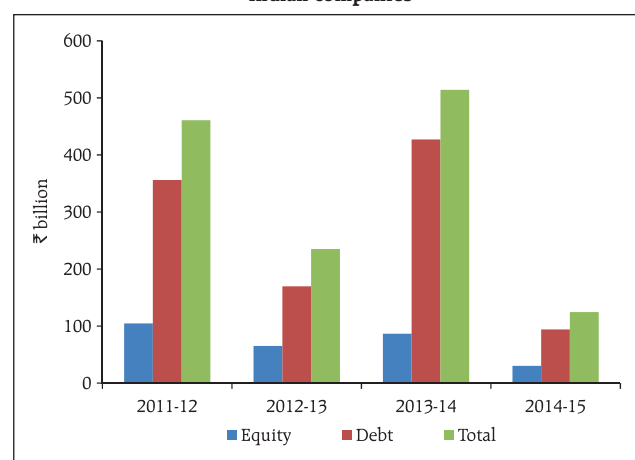
3.5 The banking system plays a predominant role in the Indian financial system, and as has been

observed, most of the risks in the system tend to eventually find a way to the banking system.⁷ Thus, the need for stronger capital markets—both equity and corporate debt—is also linked with the imperative of relieving some of the excess burden on the banking system as more liquid and developed markets will help in achieving a clear separation between market risks and banking system credit risks. However, a buoyant secondary market in equity as witnessed during 2014-15, the primary equity and debt markets have not reflected the same optimism (Chart 3.1).

Enlisting the banking sector for developing corporate bond markets

3.6 There have been some significant steps for furthering the development of corporate bond markets, including some innovative measures for roping in the banking sector in its role as a potentially large issuer. The issuance of long term bonds by banks to raise resources for lending to long term projects in infrastructure sub-sectors and in affordable housing are further encouraged with exemptions from certain regulatory pre-emptions (the cash reserve ratio and the statutory liquidity ratio on banks' demand and time liabilities and

Chart 3.1: Trends in public issues of equity and debt by Indian companies



Source: SEBI.

⁷ Rajan, Raghuram G. (2015), Address at 'CAFRAL Advanced Leadership Program', February. Available at: <http://www.cafral.org.in/sfControl/content/Speech/4292015103220AMGovernors-Speech-CALP-2015.pdf>.

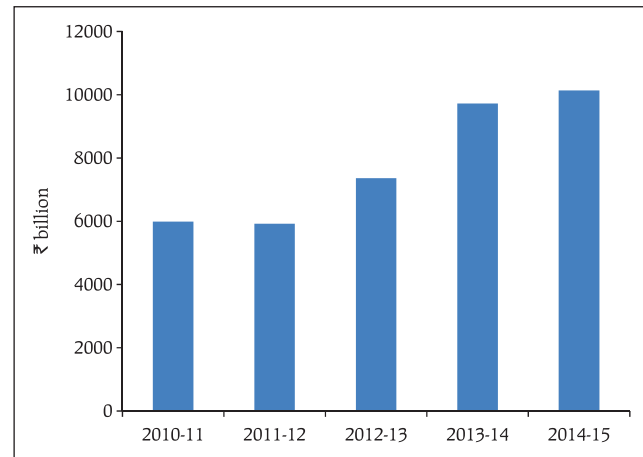
mandatory lending towards priority sectors).⁸ Apart from leveraging the positioning of banks, especially PSBs, as quasi-sovereign issuers of long term bonds, there is a possibility for considering other tools like linking long term credit approvals with a mandatory part to be raised through issuances⁹ of bonds by corporate entities and partial credit enhancements by banks to bonds issued by corporate entities. However, for achieving the desired results from the efforts aimed at developing corporate debt markets there is a need to significantly improve the liquidity in secondary markets, from current levels (Chart 3.2).

Focus on the asset quality of the banking sector

3.7 The broad regulatory approach of the Reserve Bank over the last year has been on supporting and strengthening the banking sector through measures aimed at enhancing credit discipline, addressing asset quality issues, encouraging market access, enabling earlier recognition of stress and appropriate solutions and improving corporate governance and strategies to augment capital. In July 2014, the Reserve Bank introduced a flexible financing scheme allowing banks to extend long term loans of 20-25 years to match the cash flows of projects while refinancing them every five or seven years.

3.8 However, the regulatory initiatives will need to be sensitive to the currently prevailing emphasis on the asset quality, mainly of public sector banks (PSBs) and concerns related to banks' ability to raise long term funding in the current stage of development of debt market. Furthermore, concerns related to potential asset-liability mismatches and other practical aspects involved in the provisions enabling flexible financing by banks for long term project loans to infrastructure and other core sectors

Chart 3.2: Traded value in the secondary corporate debt market



Source: CCIL.

with 'resetting' of loan terms need to be adequately addressed.¹⁰

Effectiveness of 'debt restructuring' mechanisms

3.9 Previous FSRs highlighted the importance of an objective and dispassionate assessment of the effectiveness of the performance of the corporate debt restructuring (CDR) mechanism. The CDR mechanism mainly resorted to by PSBs, was perceived to be aligning lenders' interests in favour of deferral of accounting recognition of underlying risks rather than effective restructuring resulting in opacity about the quality of the loan book thus seriously impacting market valuations of banks. As some of the restructured accounts had come up for another round of restructuring, the overall effectiveness of CDR mechanism needed to be reviewed against its intended objective of '*amicably and collectively evolve policies and guidelines for working out debt restructuring plans in the interests of all concerned.*'¹¹

⁸ RBI (2014a), 'Issue of Long Term Bonds by Banks—Financing of Infrastructure and Affordable Housing', Circular, July 15. Available at: <https://rbi.org.in/scripts/NotificationUser.aspx?id=9103&Mode=0>.

⁹ RBI (2015b), 'Large Exposures Framework and Enhancing Credit Supply', discussion paper, March 27. Available at: https://rbi.org.in/scripts/bs_viewcontent.aspx?id=298.

¹⁰ RBI (2014b), 'Flexible Structuring of Long Term Project Loans to Infrastructure and Core Industries', Circular, July 15. Available at: <https://rbi.org.in/scripts/NotificationUser.aspx?id=9101&Mode=0>.

¹¹ The corporate debt restructuring mechanism. Available at: <http://www.cdrindia.org/standingforum.htm>.

3.10 In addition to its easy accessibility, the strong preference of borrowers for CDR might have had its roots in their tendency to protect their promoter-equity from impairment, given the relatively weaker bankruptcy law in the country. Accordingly, the regulatory focus has intensified with regard to the need for separating the cases of 'wilful default' from other cases of delinquencies caused by 'genuine' economic or business factors.

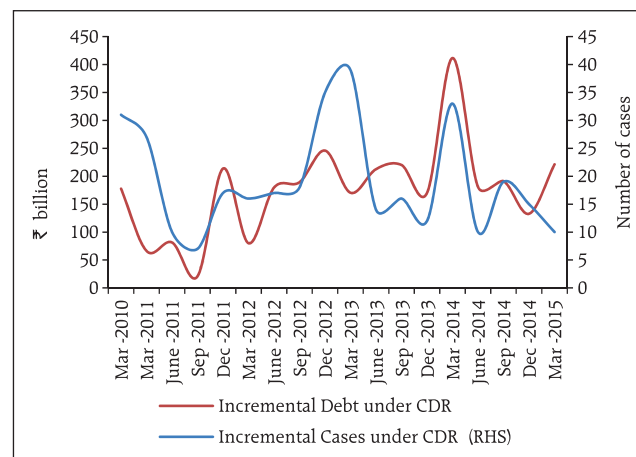
3.11 Recognising the moral hazard in perpetuating regulatory forbearance, the Reserve Bank removed the distinction between restructured and non-performing assets effective April 1, 2015. Recent trends in the number of cases and aggregate amount of debt referred and approved under the CDR cell shows the effect of withdrawal of regulatory forbearance on restructuring, especially with respect to large credit accounts (Chart 3.3).

3.12 The revised framework of the Joint Lenders Forum (JLF), along with the Central Repository of Information on Large Credits (CRILC) aim to address these issues by incentivising early identification of problems, timely restructuring of loans which are viable and taking prompt steps for recovery or sale if they are found to be unviable (Box 3.1). Concomitantly, the asset reconstruction companies (ARCs) have been permitted to consider an extended resolution period of eight years, subject to certain conditions, with respect to stressed assets which are under a restructuring proposal approved by Board for Industrial and Financial Reconstruction (BIFR) or CDR or JLF.¹²

Protecting lenders' interests through strategic debt restructuring

3.13 Learning from the experience with the CDR, the regulations dealing with restructuring of corporate debt have been modified with a view to

Chart 3.3: Incremental number of cases and amount of debt approved under CDR



Source: CDR Cell.

enabling a change of management at the borrower companies, when the operational/ managerial inefficiencies are observed to be one of the reasons behind the continuation or aggravation in the stress being felt at the borrower company. In line with the general principle that the shareholders bear the first loss rather than the debt holders, the 'restructuring' mechanisms need to include provisions for transferring equity of the company by promoters to the lenders as compensation for their sacrifices, further infusion of promoter-equity and transfer of the promoters' equity holdings to a security trust till 'turnaround' of company.

3.14 Under the strategic debt restructuring (SDR) mechanism¹³, in order to achieve the change of ownership/management at the borrower company, the consortium of banks and financial institutions / lenders under the JLF may collectively become the majority shareholder by converting their dues into equity, subject to the statutory limit set under the Banking Regulation Act, 1949. Supporting the efforts and through prompt inter-regulatory coordination, the Securities and Exchange Board of India (SEBI)

¹² RBI (2015c), 'Resolution period for BIFR/CDR/JLF case', notification, May 7, 2015. Available at: <https://rbi.org.in/Scripts/NotificationUser.aspx?Id=97111&Mode=0>.

¹³ RBI (2015d), 'Strategic Debt Restructuring Scheme', notification, June 8, 2015. Available at: <https://rbi.org.in/scripts/NotificationUser.aspx?Mode=0&Id=9767>

Box 3.1: Revised framework for dealing with the asset quality of large credit

The Central Repository of Information on Large Credits (CRILC) has been set up in the Reserve Bank to collect, store and disseminate information on borrowers enjoying exposure of ₹50 million and above from banks/non-banking finance companies (NBFCs) and insurance companies. Lenders have been provided access to the CRILC database to view individual borrower-wise consolidated exposure data. CRILC has been assigned a pivotal role in activating and coordinating the mechanism to manage stressed assets as envisaged in the Stressed Asset Framework (January 30, 2014) and the operational instructions issued subsequently.

In order to capture early warning signals of financial stress faced by borrowers, the framework requires banks to create a sub-asset—Special Mention Accounts (SMA) and classify borrowers under three SMA categories (SMA-0, SMA-1 and SMA-2) as under:

SMA Sub-categories	Basis for classification
SMA-0	Principal or interest payment not overdue for more than 30 days but account showing signs of incipient stress
SMA-1	Principal or interest payment overdue between 31-60 days
SMA-2	Principal or interest payment overdue between 61-90 days

Banks are required to form JLF as soon as an account with an aggregate exposure of ₹1,000 million and above is reported as SMA-2 to CRILC. JLF is also mandatorily required to be formed when a borrower request lender/s, with substantiated grounds, for formation of a JLF on account of imminent stress in accounts with aggregate exposure of ₹1,000 million and above. Lenders also have the option of forming a JLF even when the aggregate exposure is less than ₹1,000 million and /or when the account is reported as SMA-0 or SMA-1.

has issued notification regarding fixing of conversion price and lock-in period and providing for necessary exemptions for banks from the takeover rules thus allowing them to convert debt to equity of companies, under SDR, without having to make mandatory tender offers to minority shareholders.¹⁴

Framework for dealing with loan frauds

3.15 Rising trends in loan related frauds in the financial sector are a matter of serious concern for regulators and the government. The Reserve Bank has notified a framework¹⁵ for dealing with loan frauds with the objective of directing the focus of banks on aspects relating to detection, reporting and monitoring, while ensuring that conduct of normal business by the banks and their risk taking abilities are not adversely impacted. The framework suggests that while the Reserve Bank will take care of the concerns till the detection of a fraud (for all banks),

the government could focus on the post-detection stage (for PSBs) involving law enforcement agencies.

3.16 The framework envisages continuous monitoring of loan accounts as a fraud preventive tool with checks at different stages of the loan life cycle and identification of red flagged accounts (RFAs) based on early warning signals for accounts above ₹500 million and classification of RFAs either as fraud or otherwise within six months. Further, the framework also requires reporting of RFAs/frauds on the Reserve Bank's CRILC for dissemination amongst banks and a decision on the fraud status by JLF in case of consortium/multiple banking arrangements.

Capital needs of banks—Conservation versus augmentation of capital

3.17 PSBs have traditionally played a predominant role in the Indian financial and banking system notwithstanding their falling share in total deposits

¹⁴ SEBI (2015a), 'Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) (Second Amendment) Regulations, 2015', notification, May 5, 2015. Available at: http://www.sebi.gov.in/cms/sebi_data/attachdocs/1430885855266.pdf

¹⁵ RBI (2015e), 'Framework for dealing with loan frauds', notification, May 7, 2015. Available at: <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=9713&Mode=0>.

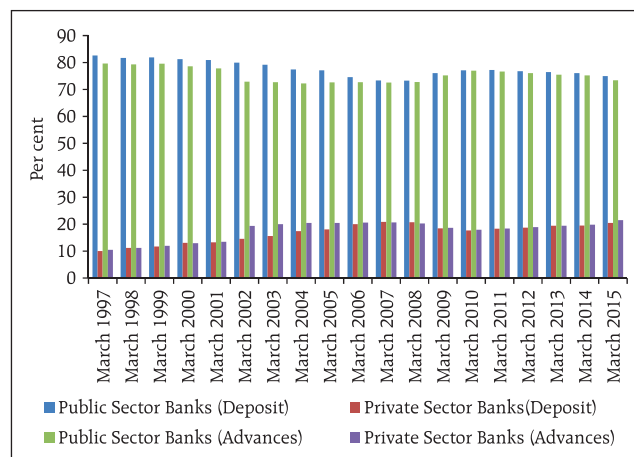
and advances of the banking system (Chart 3.4). The performance of PSBs will remain crucial in the present context even as the structure, competitiveness and composition of the Indian banking system is poised to change in the coming months with the entry of new types of entities.

3.18 Even though the jury is still out on efficiency-redundancy debates over an apparently unending capital requirement for the banking industry, the pitfalls of the framework for capital that was based on risk weights and the need to ensure caps for leverage and additional capital buffers have generally been appreciated. Close on the heels of the efficiency-redundancy trade-off comes the safety-efficiency trade-off, the manifestation of which can be seen in the public-private sector bank paradigm in India. In terms of public perception PSBs, with implicit government support, are considered to be relatively immune to destabilising impacts though it has an efficiency imperative, when judged by their returns on asset or capital employed. However, the same sense of safety eludes PSBs when it comes to their valuations. With the Indian government thinking of new performance based norms for capital infusion, this disconnect is sought to be addressed. There may be a notion, albeit an incomplete one, that with the government deciding on performance based parameters for identifying banks which deserve fiscal support, those that are not up to the mark might find it even more difficult to raise capital.

Market 'view' of bank capital

3.19 In an environment where the capital needs of PSBs have to be predominantly met by the market, there is a need to clearly define the contours of an effective regulatory and oversight regime which reduces the informational asymmetry and thereby promotes market access. In a broad sense, such a regulatory regime is required to embrace less discretion in terms of classification of assets and provisioning for expected losses which render reported information on non-performing assets

Chart 3.4: Share of PSBs in total deposits and advances of the banking system



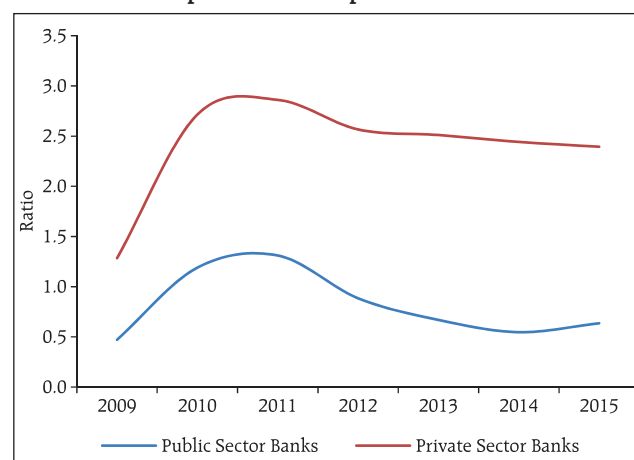
Source: RBI Supervisory Returns.

(NPAs) and profitability inadequate. In the absence of better information, markets are prone to take enabling provisions to be emblematic of across the board problems and tend to have a 'PSB discount' attached to their market-valuations (Chart 3.5).

Capital adequacy versus capital planning

3.20 The rules for minimum regulatory capital requirements for banks in India are more stringent, as compared to Basel framework and other major jurisdictions. However, perhaps, there is a need

Chart 3.5: 'Price to book value' ratio: Average for select banks in public sector and private sector



Note: Average for select banks in the public and private sectors (as on March 31).

Source: Bloomberg.

to go beyond the regulatory perspective based on numerical compliance on the capital requirements and capital adequacy, as the perception of the 'market' about banks' capital levels may be equally important consideration, especially with respect to the PSBs. Meeting regulatory prescriptions on capital adequacy is to take care of the current business portfolio whereas markets with their forward looking bias look at capital planning which in a way is an indication of the future growth planning of a bank. On the other hand, in a stressed scenario, capital constraints along with a need to protect margins may even impair banks' abilities to transmit policy rate signals.

3.21 A significant gap in capital to risk-weighted ratios (CRAR) of two sets of banks (Chapter II, Chart 2.3) with fairly divergent financial performances gives the 'impression' of a dualistic approach to capital adequacy and might be seen by the market as a sign of weakness rather than strength of the PSBs. While regulatory capital adequacy represents the floor, the actual assessment of capital adequacy should ideally include the component addressing Pillar 2 risks as also the capabilities of banks for opportunistic fund raising according to market conditions and their needs which in effect will require proactive capital planning and management.

3.22 In any case, a more market oriented approach does not imply sacrificing distributional objectives. It rather emphasises best execution of such objectives by leveraging technology, evaluating the marginal value of businesses (illustratively, the 'value' of overseas business units or focus on line of business, say 'retail') and a transparent accountability framework. Furthermore, a reorientation of the performance evaluation of the top management (chief executives) of PSBs so as to specifically incorporate stock market valuations will reduce 'principal-agent' problems inherent in such a relationship and will also reflect the true marginal cost of capital relevant for recapitalisation.

3.23 As capital infusion for PSBs by the government is also about committing tax payers' money, this calls for enhanced efficiency and capital conservation rather than an equitable distribution of scarce capital. On the other hand, while there is no dispute over the need for buffering banks with adequate capital, this may not ensure asset quality and hence the overall strength of the balance sheet (Box 3.2).

Accounting profits and efficiency in cash generation

3.24 Analysing bank balance sheets might have become complex given the nature and extent of the mandates for disclosures. Thus, it becomes imperative that disclosures do not deflect the focus of investors and analysts, out of context. The more complex the business models adopted by banks get, the more exhaustive the disclosures become, though simple cash flows may be a better indicator of the true health of banks.

3.25 Accounting measures of a bank's profitability are generally constructed based on net profit (profit after tax). However, apart from the other limitations of accounting profits in reflecting the true economic profitability of banks, some specific accounting dispensations may also create a divergence between the economic reality of underlying transactions and the way they are reflected in financial statements (accounting profits). Therefore, a robust measure of 'cash profit' (cash generated from business / operating activities of banks) could provide more useful information regarding the overall efficiency of the banks, to the users and stakeholders.

3.26 Cash profit of any business entity can be deduced from 'cash flow from operations' statement. However, in case of banks and other financial companies, the distinction between cash flow from 'operating' activities and 'financing' or 'investment' activities gets blurred. An ideal 'cash profit' calculation for a bank should adjust for all non-cash charges, accrual items and valuation gains

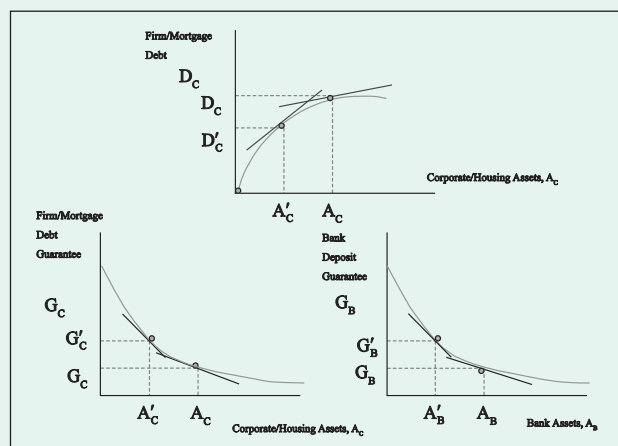
Box 3.2: Does augmentation of capital reduce risk?

Post-crisis there has been a thrust on increasing bank capital and reducing excessive leverage. The other side of this story, though less appreciated, is that if banks are unable to augment capital they must reduce the size of their balance sheets. The question that arises in this context is whether augmentation of capital is going to reduce risks for banks. In a research that is still in progress Robert C. Merton (Merton 2014) asserts that even if banks replace their lost capital to retain the same level of leverage, they still become riskier than before.

According to Merton, risky debt is nothing but risk-free debt minus guarantee of debt. In other words, an investor in risky debt performs two activities—risk-free lending and insurance writing. Drawing an analogy from 'options', Merton shows that this insurance/guarantee writing is nothing but writing a put option. Through this analogy it may be seen that the value of the guarantee is inversely related to the value of the asset. But given the convex nature of the relation between this guarantee and the asset, the risk is not linearly changing (Chart 3.A).

In other words, as asset value declines a bank becomes much more risky. As a result, the asset declines in value several times even if the positions (exposures) have not increased. The paper brings more insights to the clustering of high sigma events, saying that two sigma with a five times larger slope looks like ten sigma with a constant slope. It is all about recognising the convexity. When sovereigns explicitly or implicitly guarantee (according to Merton, sovereigns almost always guarantee their banks, either explicitly or implicitly), it adds another layer of guarantee to what banks as lenders have already underwritten while undertaking risky lending; it is nothing but guarantors writing guarantees of their own guarantors.

When banks ultimately make a mistake in their lending decisions and if the borrower/asset fails, the banks

Chart 3.A: Non-Linear Macro Risk Build-up

Source: Merton (2014).

themselves become worse credits with the sovereign being a guarantor itself becoming weaker. If the banks substantially hold government debt, the feedback loop becomes stark. It may thus be seen that the connectedness between banks and sovereigns is a potent propagation channel of macro-financial risk. Merton's piece of advice to banks is that they must ask themselves that by extending a particular loan and writing the associated guarantee, to what extent are they exposed to the risk associated with the assets that support the credit. On the other hand sovereigns need to be aware of the potential risks that may take them by surprise when they materialise, due to their perceived, if not real, interconnectedness with the banking system.

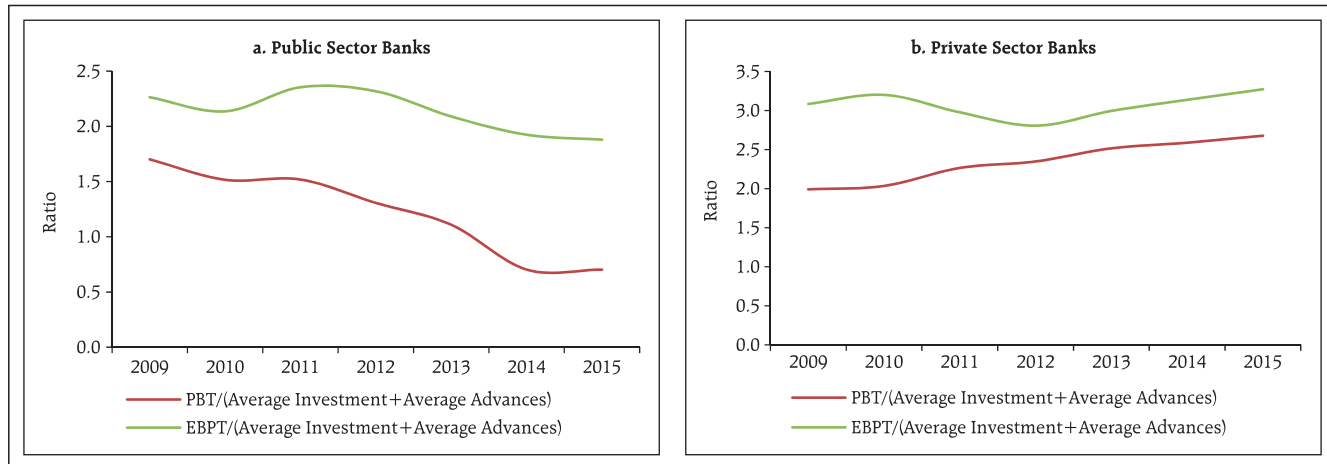
Reference: Merton, Robert C. (2014), *ADB's Distinguished Speakers Program Measuring the Connectedness of the Financial System: Implications for Risk Management*. © Asian Development Bank. Available at: <http://hdl.handle.net/11540/4102>. License: CC BY 3.0 IGO

and losses, which will require substantially granular and intensive data. However, in the absence of such detailed information, the earnings before provisions and tax (EBPT) can be tracked, with a view to capturing the 'essence' of the measure in a tractable way. Although there are other important non-cash

items, provisions are the most significant non-cash charges for banks and in case of some banks they show sharp movements, on year-on-year basis.

3.27 An analysis based on a simplified framework of earnings before provisions and taxes (EBPT) and profit before tax (PBT) and corresponding ratios

Chart 3.6: Trends in ratios of EBPT and PBT to average assets (as on March 31)



Source: RBI Supervisory Returns.

(EBPT/average advances and investments and EBT/average advances and investments) point towards divergent trends in accounting and EBPT. At the bank group level, the divergence between these two measures has increased for PSBs and decreased for private sector banks over the last five years (Charts 3.6 'a' and 'b'). There may be a need to give more importance to the cash generation capabilities of banks' assets since the value of a firm is equal to discounted free cash flows.

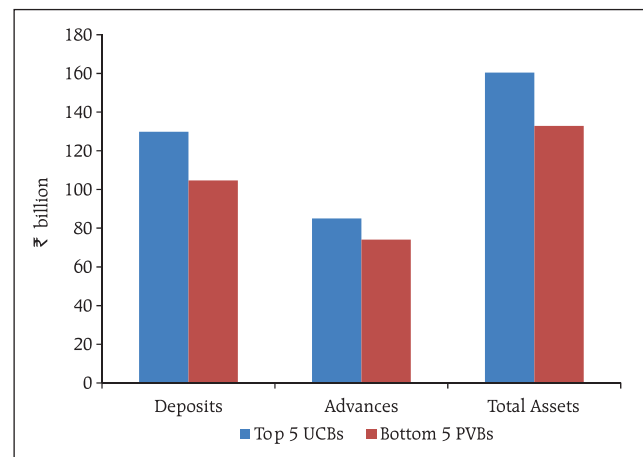
Urban co-operative banks

Size, regulation and systemic risks

3.28 The regulatory approach to urban co-operative banks (UCBs) has been tailored recognising their role and mandate for providing financial services to the less privileged sections of the population.¹⁶ Although co-operatives are intended to remain small with their activities limited to their membership, a license to carry on the banking business provides UCBs unlimited access to public deposits. With the liability of members (shareholders) restricted to membership shares, owners become the users of resources predominantly contributed by non-members leading to conflict of interest that needs to be moderated through regulation and supervision.

3.29 Some large multi-state urban co-operative banks (MS-UCBs) have, over the years, attained balance sheet sizes comparable to those of small private sector commercial banks. A comparison of the top 5 UCBs with that of the five smallest private sector commercial banks indicates that in terms of deposits, advances and total assets some UCBs have business and asset sizes more than those of small private banks (Chart 3.7).

Chart 3.7: Comparative size of the 5 biggest UCBs vis-a-vis the 5 smallest private sector SCBs



Note: Average of deposits, advances and total assets of 5 largest UCBs and 5 smallest private sector scheduled commercial banks (PVBs) in terms of total assets.

Source: RBI Supervisory Returns.

¹⁶ UCBs are, therefore, regulated under the less stringent BASEL I norms as opposed to BASEL II and III norms applicable to commercial banks.

3.30 Weak corporate governance of UCBs has been a major issue plaguing the sector which together with lack of access to market for capital, has been a significant factor resulting in liquidation of many UCBs. As 'co-operatives' come under the domain of states¹⁷, the Reserve Bank does not have the same level of control on the management of UCBs, as it has in respect of scheduled commercial banks (SCBs).¹⁸ While the existing resolution powers available with the regulators (imposing a moratorium and facilitating voluntary and/or compulsory mergers with stronger financial institutions), have served the purpose so far, these may not be sufficient to deal with the failure of a large and complex institution. Thus, there is a need for improving the governance, capitalisation and resolution mechanism in co-operative banking.

3.31 In view of the possible implications of UCBs for systemic risks, a committee has been constituted to re-examine and recommend appropriate set of businesses, size, conversion and licensing terms and other related aspects for the UCBs.¹⁹

Non-banking financial sector

3.32 In addition to banks, most of the other types of financial entities in the organised sector (deposit-accepting non-banking finance companies, mutual funds, insurance companies, pension funds and intermediaries in securities and commodity markets) come under the purview of a designated regulator. Non-banking finance companies (NBFCs) as a broad category generally cover a broad spectrum of entities and activities and are associated with the notion of shadow banking. However, NBFCs meeting the minimum criteria for registration are under regulation of the Reserve Bank. The deposit-

accepting NBFCs (NBFCs-D) and other NBFCs deemed as systemically important among the non-deposit accepting NBFCs (referred to as NBFCs-ND-SI) are subject to relatively tougher prudential regulations. The regulatory framework for NBFCs was revised in late 2014 with emphasis on further harmonising and strengthening the prudential norms for these NBFCs.

Shadow banking—Different shades in the Indian context

3.33 As highlighted in previous FSRs, while the size of the shadow banking sector in India²⁰ is substantial with significant levels of interconnectedness with the banking system, risks emanating from this sector are not of the same shade and magnitude as observed in other major jurisdictions. India's financial system is characterised by low penetration of banking and other financial services and is much less complex in terms of financial products. In view of the relatively wide regulatory oversight, the concerns from the shadow banking sector as experienced in advanced financial markets may not be fully valid for developing markets like India.

3.34 For India, the concerns in this regard mainly relate to a large number of small entities with varying activity profiles working in the organised or unorganised sector outside the regulatory purview. Previous FSRs have raised possible system risks from unregulated financial entities and unauthorised financial activities in the organised and unorganised sectors, especially in view of the possibility of public perception and mis-information about them being under regulation, which may give rise to consumer protection issues. Such issues, with their frequency of occurrence even if scattered and

¹⁷ States refer to the provincial legislation and governments in India's federal structure.

¹⁸ Some of the provisions of Section 10A and 10B of the Banking Regulation Act, 1949 were not applicable to UCBs.

¹⁹ High Powered Committee on Urban Co-operative Banks (chaired by Shri R. Gandhi, Deputy Governor, Reserve Bank of India). Available at: https://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=33135.

²⁰ According to the classification used in the methodology for monitoring the shadow banking sector by the Financial Stability Board (FSB Shadow Banking Monitoring Report, November 2014).

heterogeneous across time and geography, may take the shade of a systemic stability issue through the 'trust' channel. These events may have significant other socioeconomic implications, especially when they affect sections of the lower-income strata of the population and may compromise the success of efforts towards financial inclusion. Therefore, the challenge for regulators and state agencies is keeping a watch on and having a measure of the scale and nature of activities and developments in this sector.

Action against illegal money raising funds

3.35 The mushrooming of illegal money-raising funds in the last few years and their failure to provide the 'returns' promised to investors have been a source of concern with potential to cause systemic stress. In this context, SEBI has significantly cracked down on various unregistered collective investment schemes (CIS)/deemed public issue (DPI) in the last year.

3.36 Some unlisted companies are luring retail investors by issuing securities including non-convertible debentures/non-convertible preference shares in the garb of private placement without complying with legal provisions and relevant SEBI regulations. As part of punitive and preventive action with respect to such activities, SEBI has issued orders against errant schemes/entities and has advised investors through caution notes to avoid investing in illegal CIS and DPIs.²¹ In addition to this, investors have been advised to verify whether such entities have filed offer documents/applications with any recognised stock exchange for listing. Companies are also cautioned not to issue securities to public without complying with provisions of the law.

3.37 Under the initiative of the Financial Stability and Development Council (FSDC), several steps have been taken to make SLCCs more effective for better dissemination of market intelligence with regard to unauthorised deposit schemes and CIS.

Accordingly, SLCCs meet at quarterly intervals and are chaired by the Chief Secretary of state Government / Administrator of Union Territory. The FSDC sub-committee takes stock of the activities of SLCCs on a half- yearly basis and the discussions cover subjects such as progress regarding enactment of the Protection of Interests of Depositors (PID) Act, information- sharing and investor awareness programmes.

Financial inclusion

Financial inclusion plans of banks

3.38 As discussed in the earlier sections of this chapter, the regulatory focus of different countries will be different given the different socio-economic circumstances and different stages of financial sector development. Thus, for EMDEs like India, the role and functioning of financial sector need to be viewed, not only from the perspective of promoting growth and stability, but also in terms of 'distributional equity'.

3.39 Indian development planning has focused on formulation of programmes and policies aimed at promoting social and financial inclusion. The disbursement of financial benefits needs a systematic channel which will provide for financial empowerment and make monitoring easier and the local government bodies more accountable. The 'Pradhan Mantri Jan Dhan Yojana' (PMJDY) launched in August 2014 and the 'RuPay Card' - a 'payment' solution, are important schemes in this regard. These two schemes are complementary and will enable achievement of multiple objectives of financial inclusion, insurance penetration, and digitalisation.

3.40 Financial inclusion plans (FIPs) submitted by banks which are duly approved by their boards form part of the business strategies of banks. These plans have facilitated changing the perspective of banks towards financial inclusion from a mere

²¹ For instance, SEBI issued a caution note dated December 17, 2014 to investors informing them not to invest in schemes floated by 51 companies.

social obligation to a viable business opportunity. These plans have proved to be an effective tool for monitoring the impact of the efforts made towards financial inclusion. The comprehensive financial inclusion plans capture data relating to progress based on various parameters including basic savings bank deposit accounts (BSBDAs), small credits and business correspondent-information and communication technology (BC-ICT) transactions.

3.41 There was considerable increase in the total number of banking outlets, opening of BSBDAs and small credits during 2014-15 (Table 3.1), because of the government's initiative under the Pradhan Mantri Jan Dhan Yojana (PMJDY). While a rapid increase in the number of bank account holders in the country since the launch of PMJDY is a strong indicator of result-oriented efforts on financial inclusion, this momentum needs to be translated into meaningful improvement in penetration of banking and credit facilities, especially in rural areas.

Financial safety nets: Deposit insurance

3.42 The evolution of the global financial crisis (GFC) showed the importance of maintaining depositor confidence in the financial system and the key role that deposit protection plays in maintaining this confidence. The crisis underscored the need to increase deposit insurance coverage and strengthening of funding arrangements to enhance financial stability. The International Association of Deposit Insurers (IADI) and the Basel Committee on Banking Supervision (BCBS) issued 'Core Principles for Effective Deposit Insurance Systems' in June 2009, which underwent revision in November 2014. A compliance assessment methodology for the core principles was released in December 2010. The core principles and their compliance assessment methodology are used by jurisdictions as a benchmark for assessing the quality of their deposit

Table 3.1: Progress on financial inclusion by banks since 2010 and during 2014-15

Particulars	Year ended March 10	Year ended March 14	Year ended March 2015	Progress April 14-March 15
Banking Outlets in Villages – Branches	33,378	46,126	49,965	3,839
Banking Outlets in Villages – BCs	34,174	333,845	499,587	165,742
Banking Outlets in Villages - Other Modes	142	3,833	4,552	719
Banking Outlets in Villages –Total	67694	383,804	554,104	170,300
Urban Locations covered through BCs	447	60,730	96,847	36,117
BSBDA-Through branches (Number)	60.2	126.0	210.2	84.2
BSBDA-Through branches (Amount)	44.3	273.3	363.7	90.4
BSBDA-Through BCs (Number)	13.3	116.9	187.8	70.9
BSBDA-Through BCs (Amount)	10.7	39.0	74.6	35.6
BSBDA-Total (Numbers)	73.5	243.0	398.0	155.0
BSBDA Total (Amount)	55.0	312.2	438.3	126.0
OD facility availed in BSBDAs (Number)	0.2	5.9	7.6	1.7
OD facility availed in BSBDAs (Amount)	0.1	16.0	19.9	3.9
KCCs -Total (Number)	24.3	39.9	42.6	2.6
KCCs -Total (Amount)	1,240.0	3,684.5	4,430.3	745.8
GCCs-Total (Number)	1.4	7.4	9.2	1.8
GCCs-Total (Amount)	35.1	1,096.9	1,301.6	204.7
ICT A/Cs-BC-Total Transaction (Number)	26.5	328.6	477.0	477.0
ICT A/Cs-BC-Total Transactions (Amount)	6.9	524.4	859.8	859.8

OD - Overdraft, GCCs - General credit cards, KCCs- Kisan credit cards

Note: All amounts in ₹ billion. Number of units in millions.

Source: RBI.

insurance systems and for identifying gaps in their deposit insurance practices and measures to address them.

3.43 With the present limit of deposit insurance in India at ₹0.1 million, the number of fully protected accounts (1,345 million) as at end March 31, 2015 constituted 92.3 per cent of the total number of accounts (1,456 million) as against the international benchmark²² of 80 per cent. Amount-wise, insured

²² IADI (2013), 'Enhanced Guidance for Effective Deposit Insurance Systems: Deposit Insurance Coverage', guidance paper, March. Available at: http://www.iadi.org/docs/IADI_Coverage_Enhanced_Guidance_Paper.pdf.

deposits at ₹26,067 billion as at end-March 2015 constituted 30.8 per cent of assessable deposits at ₹84,751 billion against the international benchmark of 20 to 30 per cent. Insured deposits of banks which are under 'directions'²³ constituted about 0.4 per cent of the total insured deposits of commercial and co-operative banks as at end-March 2015 and accounted for about 21 per cent of the 'deposit insurance fund'. As banks which are under 'directions' will go into liquidation over a period of time, the outgo of funds from the Deposit Insurance and Credit Guarantee Corporation (DICGC) from time to time is likely to be insignificant. As these banks are small and do not have any systemic importance in terms of interconnectedness, there will not be any material impact on the banking system from the point of view of financial stability.

Systemic risks from co-operative banks under 'directions'

3.44 The nature of 'directions' issued to co-operative banks by Reserve Bank include restrictions/ban on grant/renewal of loans and advances, grant of accommodations without specific authorisation from the respective regulator, making/renewing investments in bonds without prior approval of the Reserve Bank, incurring any liability including borrowing of funds and accepting fresh deposits or making any payments or discharging any liability or obligation, except in accordance with the provisions of the directives. Around 26 state co-operative banks (StCBs)/district central co-operative banks (DCCBs)

and 24 urban co-operative banks (UCBs) were under 'directions' by the Reserve Bank as on December 31, 2014. The extent of devolvement on DICGC in the event of all the banks under directions going into liquidation/ordered to be wound up will be ₹66.2 billion in case of StCBs/DCCBs and ₹37.6 billion in the case of UCBs aggregating ₹103.8 billion.

Securities market

Trends in algorithmic trading and regulatory steps

3.45 Algorithm (Algo) trading²⁴/high frequency trading (HFT)²⁵ in financial markets have undergone substantial change with the development in information processing and communications technologies over the last two to three decades. Algo trading was introduced in India in April 2008 with the introduction of direct market access (DMA)²⁶. Further, latency²⁷ was reduced with the introduction of co-location²⁸ services by NSE in 2010. The previous FSRs have highlighted the benefits of innovations and the potential risks from HFT in equity and equity derivative markets.

3.46 Algo trading is subject to SEBI regulations issued in March 2012 and May 2013. These regulations, *inter alia*, include a list of minimum order-level checks to be performed on algorithmic orders, a consolidated audit trail and framework for penalising cases of high order-to-trade ratios. The regulations also specify the framework of conformance testing of new algorithms and subjecting the algorithmic trading system to audit every six months.

²³ The Reserve Bank issues certain 'directions' to co-operative banks to protect the interests of depositors and also in public interest on finding irregularities during oversight procedures.

²⁴ Algo trading refers to the use of electronic platforms for entering trading orders with a computer programme (algorithm) determining the decisions on aspects such as the timing, price, or quantity of the order or in many cases initiating the order without human intervention.

²⁵ HFT is a special class of Algo trading, in which computers make elaborate decisions to initiate orders based on electronically accessed information at a very fast speed (in microseconds), before human traders are capable of processing the information they observe.

²⁶ Direct market access (DMA) is a facility that allows 'clients' to directly access a broker's trading infrastructure (linked to the exchange trading system) without any manual intervention by the broker.

²⁷ Latency in the context of computer networks and communication systems refers to a delay and is normally defined in terms of the time it takes for a data packet to travel from one point to another. Reduced 'latency' with respect to trading refers to network connections used by financial intermediaries to connect to stock exchanges and electronic communication networks to execute financial transactions at a very fast pace.

²⁸ Market participants can rent servers situated within NSE's premises.

However, the increased complexities of algorithm coding and reduction in latency due to faster communication platforms needs focussed monitoring as they may pose risks in the form of increased possibilities of error trades and market manipulation.

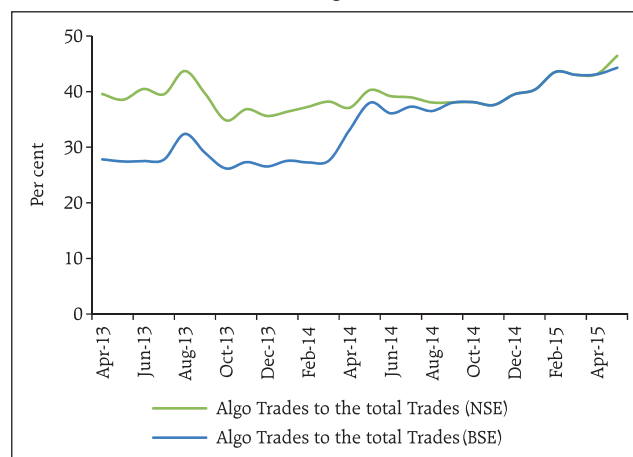
3.47 Volumes in Algo trading and HFT increased substantially in the cash segment of the Indian equity market from 17 per cent (NSE) and 11 per cent of trades (BSE) respectively in 2011 to around 40 per cent of total trades in both the exchanges in March 2015 (Charts 3.8). Further, the fact that the share of Algo orders in total orders and the share of cancelled Algo orders in the total number of cancelled orders is around 90 per cent creates concerns relating to systemic risks.

Abnormal movements in Indian stock markets

3.48 There have been certain instances of abnormal market movements in Indian stocks which have been attributed, by market experts, to algo trading/HFT. Some of these episodes though are explainable with factors other than algo trading/HFT.

3.49 However, the increasing volume of algo trades/HFT and their attendant risks have forced regulators the world over to have a closer look at gaps in the existing regulations and explore ways of strengthening them. The Senior Supervisors Group (SSG)²⁹, a group of 10 supervisors issued a report on April 30, 2015 that assesses risks associated with algorithmic trading and identifies risk-based control principles and questions for supervisors and supervised firms to consider when assessing the current control environment.³⁰ SEBI keeps a close watch on the developments to formulate appropriate policies based on recommendation by the SSG.

Chart 3.8: Trends in share of algo trades in total trades of the equity cash segment



Source: SEBI.

Index based market-wide circuit breaker mechanism

3.50 The circuit breaker mechanism intends to temper unwarranted volatility in the stock market by providing a 'cooling off period'. SEBI had introduced the index based market wide circuit breaker system in securities markets in June 2001 wherein the circuit breaker system applies at different stages of the index movement at 10, 15 and 20 per cent either way. It is designed to bring about a coordinated trading halt in all equity and equity derivative markets nation-wide. Further, these percentages were translated into absolute points of index variations on a quarterly basis - calculating these percentages with reference to the closing price of the index on the last trading day of the immediately preceding quarter. This framework was partially modified in September 2013 to provide for daily revision of index based market-wide circuit breaker limits and resumption of trading after the halt with a pre-open 'call auction' session to reduce volatility.

²⁹ SSG comprises supervisory agencies from 10 countries--Canada, France, Germany, Spain, Netherlands, Italy, Switzerland, UK, Japan and USA.

³⁰ French Autorite des Marches Financiers (AMF) published guidance on the use of algorithmic strategies for trading in certain French securities in December 2014.

3.51 With a view to enabling securities markets halt at the very instance of a breach of trigger limit, some additional requirements were laid down by SEBI in January 2015, which will further strengthen the index based market-wide circuit breaker mechanism.³¹ Accordingly, national level stock exchanges (NSE and BSE) are now required to compute their market-wide index ('Nifty' and 'Sensex' respectively) after every trade in the index constituent stocks and need to check for breach of market-wide circuit breaker limits after every such computation of the market-wide index. In the event of a breach of the market-wide circuit breaker limit, the stock exchanges are required to stop matching orders to bring about a trading halt and unmatched orders present in the system are thereupon purged by the stock exchanges.

3.52 These exchanges are also required to implement suitable mechanisms to ensure that all messages related to market-wide index circuit breakers are given higher priority over other messages. Further, the systems (including the network) for computation of the market-wide index, checking for breach of circuit breaker limits and initiating a message to stop matching of executable orders and acceptance of fresh orders, can not be used for any other purposes.

Regulation to counter insider trading

3.53 While India's securities markets have been subject to regulations with respect to insider trading since 1992, lessons from recent episodes of violations of regulations in Indian and international markets, called for a comprehensive review and strengthening of the existing legal and enforcement framework. SEBI constituted a committee³² to review

the extant insider trading regulatory regime and based on the recommendations of the committee, SEBI (Prohibition of Insider Trading) Regulations, 2015 (referred as 'new regulations') were notified in January 2015 which came into force from May 15, 2015, replacing the SEBI (Prohibition of Insider Trading Regulations), 1992 (referred as '1992 regulations'). The new regulations on insider trading aim to align the Indian regime with international practices and provide clarity with respect to definitions and concepts and facilitate legitimate business transactions.

3.54 Under the new regulations, the definition of 'insider' has been made wider by including persons connected on the basis of being in any contractual, fiduciary or employment relationship that allows such persons access to 'unpublished price sensitive information' (UPSI). The definition of UPSI has been strengthened in several ways: a test to identify price sensitive information has been made on the basis of the material effect on the price and there is no separate definition of 'unpublished' and UPSI has been aligned with the listing agreement, covering all material events under listing events. The new regulations also provide a platform for disclosing information and information published on the website of stock exchanges will ordinarily be considered as 'generally available'.

3.55 As part of other important features of these regulations, companies are entitled to require 'third-party connected persons' to disclose their trading and holdings in securities of the company.³³ Also, in line with the Companies Act, 2013, the new regulations prohibit directors and key managerial personnel from trading in derivatives on securities

³¹ SEBI (2015a), 'Index based market-wide circuit breaker mechanism', circular, January 12. Available at: http://www.sebi.gov.in/cms/sebi_data/attachdocs/1421059410188.pdf.

³² Committee under the chairmanship of Hon'ble Justice N. K. Sodhi

³³ This is to enable a listed company to internally review and keep a check on whether there has been any trading by persons who become connected persons by virtue of their association with the company. This provision confers discretion on any company to seek such information.

of the company. Further, a provision of trading plans has been introduced for 'insiders' with necessary safeguards. The compliance burden on companies has been eased by removing the requirement of repeated disclosures and aligning them with the 'Takeover Code'. The principle based Code of Fair Disclosure and Code of Conduct has also been prescribed.

3.56 Every listed company and every market intermediary registered with SEBI is mandated to have a code of conduct to regulate, monitor and report trading by its employees and other connected persons with a view to monitoring the administration of the regulations and their enforcement. A system of pre-clearance of trades, recording of reasons for decisions and handling of UPSI on a 'need to know' basis are some of the provisions under the regulations to 'prevent' insider trading.

Re-hypothecation of shares as collateral

3.57 According to International Organisation of Securities Commissions (IOSCO) Risk Outlook 2014-15, risk transfers involved in collateral transactions and transformation could be a potential area for build-up of systemic risk, especially given the pro-cyclical nature of these activities. The increased use of collateral in financial transactions leads to a greater degree of 'interconnectedness' with asset encumbrances on banks' balance sheets and has implications for the structure of the financial system. This results in added complexity and opacity in the financial system, which, in turn, increases the risk of pro-cyclicality.

3.58 The need for more collateral has prompted market participants to develop innovative ways to move collateral around - to where it is needed the most. These practices include collateral transformation and optimisation services, as well as repo and re-hypothecation. Re-hypothecation or re-use of collateral generally involves a borrower

pledging collateral to secure a debt and the creditor re-using the pledged collateral as collateral for further borrowing. In international markets, if a collateral-taker takes collateral by way of title transfer and then provides the same as collateral to someone else either by way of title transfer or pledge that will be treated as re-hypothecation. Most re-hypothecations have been observed to happen by way of title transfers in both 'legs' of the repo transactions.

3.59 In India, collateral can be given by a client to a clearing member either by way of marking a pledge in the depository system or by way of title transfer. In case a pledge is marked in the depository system, there are in-built system checks to disallow re-pledging of such securities. If the collateral is given by a client to the clearing member by way of title transfer, the clearing member can transfer these securities to any other account, including pledging the securities as collateral with the clearing corporation. However, in the case of title transfer by a client to a clearing member, under regulations the clearing member is required to use it as collateral only for the purpose of meeting the collateral requirements of the client who has transferred it and he cannot use it as collateral for his own or any other client's account. Therefore, the risks of re-hypothecation/re-pledging, as highlighted in the IOSCO Risk Outlook, are not significant in case of Indian context.

3.60 However, there may still be a possibility of this collateral being used for purposes other than those it is intended for, by the clearing member, as the securities are transferred into an omnibus account. As this would be construed as illegal or fraudulent use of collateral, there is a need to monitor these aspects and take corrective actions in case of gaps. Accordingly, the extant regulatory framework requires the clearing member/broker to maintain records of collateral transfers from a client which are subject to inspection by SEBI/ stock exchanges.

Move towards risk-based supervision of market intermediaries

3.61 With the objective of designing a 'best practice' regulatory approach towards supervision of market intermediaries, a risk based supervision task force was created within SEBI. The supervisory approach recommended by the task force for intermediaries depends on the risk group under which an intermediary falls, which is assigned, based on the overall risk assessment of the intermediary.

3.62 The recommended supervisory approach provides for a combination of onsite (comprehensive and thematic inspection) and offsite monitoring of the intermediaries by SEBI and first line of regulators like exchanges and depositories for holistic supervision of intermediaries. The entities falling in the high risk group are subjected to stricter monitoring (offsite) and comprehensive inspections. Thematic inspections as a supervisory tool are to be used for specific purposes such as verifying compliance with recently issued regulatory requirements, on references received from departments within SEBI, regulatory bodies, or where a focussed review of assessing compliance in a particular area of operations is needed.

3.63 SEBI has started implementing the recommendations of the task force in a phased manner. Supervision is an ongoing process and based on the experience gained, the concerned supervisory divisions can gradually scale up the risk parameters to gauge the riskiness of intermediary as well as supervisory actions.

Corporate governance by listed companies

3.64 The new Companies Act has made major advancements in ensuring better corporate governance in Indian companies by providing a more detailed framework for independent directors,

related party transactions (RPTs), compulsory constitution of certain committees like the stakeholders' relationship committee, remuneration and nomination committees, expanded the role of the audit committee and provided other provisions like e-voting and a vigil mechanism for directors and employees to report genuine concerns, at least one woman director on the boards of listed companies and performance evaluation of independent directors. SEBI has aligned the provisions of Clause 49 related to equity listing, with those mandated under the Companies Act, 2013. In addition, SEBI has prescribed certain additional requirements for listed companies (effective from October 1, 2014) to make the corporate governance framework more effective and in line with international best practices. In addition, principles of corporate governance have also been laid down in the Listing Agreement. In view of these developments in the norms for corporate governance in India, the *World Bank Ease of Doing Business Report 2015* ranked India 7th for 2014 in terms of protection of minority shareholders, which is a marked improvement from 34th rank in 2013.

3.65 SEBI has streamlined the processes and procedures with regard to actions for non-compliance of certain listing conditions which had so far been considered as grounds for suspension of trading by recognised stock exchanges.³⁴ In order to maintain consistency and uniformity in approach in this regard, SEBI has laid down a uniform structure of 'fines' for non-compliance of certain clauses of the 'listing agreement' and 'standard operating procedures' for suspension and revocation of suspension of trading in the shares of such listed entities. It has also been mandated that every recognised stock exchange will put in place a system to monitor and review compliance with respective listing conditions by listed companies.

³⁴ SEBI (2013), 'Amendment to bye-laws of recognised stock exchanges with respect to non-compliance of certain listing conditions and adopting Standard Operating Procedure for suspension and revocation of trading of shares of listed entities for such non compliances', circular, September 30. Available at: http://www.sebi.gov.in/cms/sebi_data/attachdocs/1380540369464.pdf.

3.66 In order to improve the effectiveness of the monitoring mechanisms of stock exchanges to ascertain the adequacy and accuracy of disclosures made in compliance with the Listing Agreement, stock exchanges have been advised to put in place appropriate frameworks to effectively monitor disclosures. Stock exchanges have also been advised to put in place appropriate mechanisms for handling complaints related to inadequate and inaccurate disclosures and non-compliances. Stock exchanges are further required to submit 'exception reports' to SEBI containing details of companies not responding to the clarifications sought by it and/or where the responses submitted by a company are not satisfactory. Further, stock exchanges have also been advised to disclose details of promoters/directors/key managerial personnel of defaulting companies on their websites.

Insurance sector

Need for expanding the coverage of agricultural insurance

3.67 Agriculture remains one of the major occupations for a large part of the population in the country. Agricultural credit, as an important part of priority sector lending dispensation for banks receives attention, although challenges still remain in terms of making credit available at the right time to the needy, especially small and marginal farmers. The crop insurance business is inherently riskier and costlier as compared to other insurance areas as the incidences of crop failures are not randomly or independently distributed since weather related events affect an entire area and population at the same time.

3.68 While various schemes have been launched from time to time, the coverage of agricultural insurance still remains low as only 4 per cent of the farmers reported having crop insurance and

only 19 per cent of the farmers ever used any crop insurance.³⁵ The coverage in terms of value of agricultural output is also still small. With limited coverage and a relatively high premium, insurance schemes, unless carefully designed are prone to become unviable. Also since the threshold yield calculated on the basis of average yield of the area (block) in the past three or five years, is used as the basis for assessing the extent of crop loss for individual farmers, farmers are further discouraged from buying such an insurance product. Also, though compulsory linking crop insurance with bank credit availed by a farmer protects the bank from losses, which indirectly helps the farmer too, it makes the insurance product a 'compulsory' add-on cost for a farmer.³⁶

3.69 Various measures have been taken in recent years with a view to strengthening the crop insurance services (Box 3.3). In order to increase the penetration of crop insurance, it has been decided to use the agency network of the four General Insurance Public Sector Association (GIPSA) companies to sell crop insurance. In this regard the Insurance Regulatory and Development Authority of India (IRDAI) has given its approval for the co-insurance arrangement between Agriculture Insurance Company (AIC) and the four GIPSA Companies which will cover only non-loanee farmers under Weather Based Crop Insurance Scheme (WBCIS) and Modified National Agricultural Insurance Scheme (MNAIS).

Commodity derivatives market

3.70 An integrated development of the commodity markets' eco-systems including commodity spot markets, derivative markets and the warehousing sector is critical for improving the efficiency of regulations in the commodity markets space and also for bringing convergence between spot and commodity derivatives markets. Trading in

³⁵ National Sample Survey Organisation (NSSO) (2014).

³⁶ It is widely accepted that insurance works best when it is voluntary and customised.

Box 3.3: Measures for strengthening crop and other insurance services

Various measures for ensuring financial protection to farmers and economically weaker sections of society have been initiated by the Insurance Regulatory and Development Authority of India (IRDAI), the regulator for the insurance sector in India. IRDAI has formulated micro-insurance regulations which provide a platform for distributing insurance products, certain levels of cover and premium and benefit standards, which are affordable for rural and urban poor. These regulations have allowed non-government organisations (NGOs), Reserve Bank regulated NBFCs, primary agriculture societies, urban co-operative banks and self-help groups (SHGs) to act as agents for insurance companies in marketing micro-insurance products.

These micro-insurance agents can also work with the Agriculture Insurance Company of India Limited (AICL) for distributing micro-crop insurance products. These new distribution channels will help in reaching out to the poor and deprived sections of the population, especially those residing in rural areas. Insurance companies are also encouraged to devise products with smaller premiums and less coverage which can help in catering to the insurance needs of the low-income population which cannot either afford to or do not have access to traditional plans. Currently, about 50 crop insurance

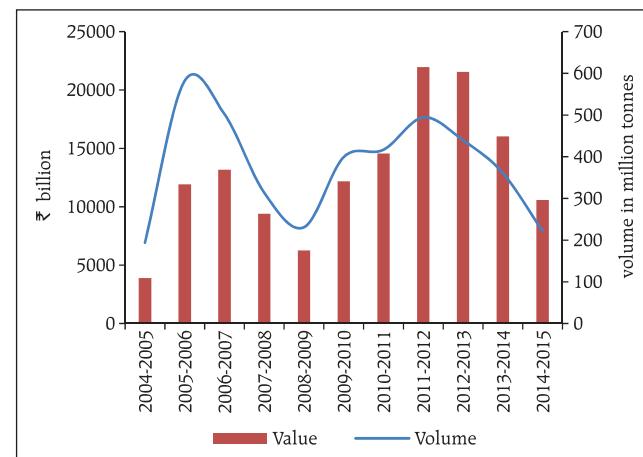
products are being marketed by AICL and other general insurance companies.

Recently IRDAI formulated a draft regulation, IRDAI (Obligations of Insurers to Rural and Social Sectors) Regulations, 2015, in pursuance of the amendments brought about under section 32 B of the Insurance Laws (Amendment) Act, 2015. These regulations impose obligations on insurers towards providing insurance cover to the rural and economically weaker sections of the population. The regulation mandates that the insurers have to necessarily sell a specified percentage of policies and underwrite a specified percentage of gross premium with respect to life and non-life insurance companies respectively, to the rural and economically weaker sections. Stringent penalties are also prescribed under the act for non-compliance of this provision. To ensure faster settlement of crop insurance claims the regulator is actively considering the possible use of satellite remote sensing technology as an efficient and reliable mapping tool for yield estimation for assessment of risk and settlement of crop insurance losses. With a view to addressing the prevailing low levels of awareness about crop and other insurance products, IRDAI has been playing a proactive role in promoting insurance education so as to improve financial literacy among the population.

derivatives in agricultural commodities has taken deeper roots in India during the last 10 years, although the volumes have fallen during last two years (Chart 3.9).

3.71 Besides, the futures market has enhanced liquidity in commodity trading which has not only helped better price discovery at the national level but has also created a physical market for commodities. Enabling infrastructure such as warehouses and supply chain participants have helped scientific storage of commodities and reduced price volatility in the long run.

3.72 The Reserve Bank's recent guidelines³⁷ advising banks to encourage hedging of commodity

Chart 3.9: Trends in agricultural commodity derivatives

Source: Forward Markets Commission.

³⁷ RBI (2015f), 'Hedging of Commodity Price Risk—Creating awareness among borrowers', notification, May 28. Available at: <https://rbi.org.in/Scripts/NotificationUser.aspx?Id=9748&Mode=0>.

price risks by large agricultural borrowers including agricultural processors, traders, millers and aggregators among others is expected to promote the use of commodity derivatives by stakeholders exposed to risks from volatility in underlying commodities. Banks may potentially play an important role in educating their customers about the suitability and appropriateness of various hedging tools which may also reduce the scope of mis-selling of derivatives. While hedging of commodity price risks will be mutually beneficial for banks as well as borrowers, banks will need to consider the level of sophistication, understanding and scale of operation and requirements of their agri-borrowers while advising them on hedging tools.

Need for stronger linkages between spot and futures markets in commodities

3.73 There is a need to strengthen efforts for developing an integrated and linked national market for commodities, especially for agricultural commodities. Presently, spot markets in agricultural commodities in India are fragmented, and the high cost of intermediation in the supply chain due to several state (provincial) taxes, such as octroi, mandi³⁸ taxes, levies and fees, restrictions on/difficulties in movement of commodities in a state and also between states lead to distortions in determining prices. In addition, deficiency of storage infrastructure in the main agricultural markets, lack of assaying and grading facilities and inadequate institutional credit for post-harvest processes provide little incentive to producers to improve storage and marketing practices. All these factors hinder the development of a national spot market for commodities.

3.74 Commodity spot markets are regulated by state governments under respective state acts. With regard to the regulation of the futures market, the Forward Contract (Regulation) Act, was enacted in 1952 and the Forward Markets Commission (FMC), the regulatory body for commodity derivative markets was set up in 1953. With the proposed merger of FMC with SEBI and inclusion of commodity derivatives under the definition of securities, the regulatory mechanism is expected to strengthen and become harmonised.

Leveraging technology for improving efficiency of spot markets

3.75 To reduce prices of commodities for consumers and to ensure a higher realisation for sellers, a national market for commodity spot trading needs to be created by encouraging electronic on-line trading/mandi modernisation to reduce the cost of intermediation which is very high at present. This will ensure a transparent price discovery mechanism. The existing opaque system creates a huge price asymmetry and enables intermediaries to deprive both sellers and buyers of a fair price. The concept of 'one state-one market' and the efforts being made in a few states such as Karnataka and Telengana to integrate mandis electronically need to be replicated in other states. Technology should be leveraged to develop an integrated market by mandi modernisation and e-markets. The Agri-tech Infrastructure Fund of the Ministry of Agriculture set up with the objective of developing a national agricultural market will enable the integration of spot markets and improve the efficiency of futures markets in price discovery. This initiative will help in progressing towards a barrier-free efficient market for marketable surplus items that are available in mandis across the country.³⁹

³⁸ Octroi refers to the type of levy on goods entering a town or city from outside that town. 'Mandi' is a Hindi language word for 'marketplace'. It was traditionally used to refer to marketplaces for food and agri-commodities.

³⁹ The scheme of the Ministry of Agriculture, Government of India, reported to be implemented by creating an e-market platform for 585 regulated wholesale markets in three years will start with 50 Agriculture Produce Marketing Committees (APMCs) in five states.

Need for legislative and tax reforms

3.76 Restrictions on buying and selling and movement of goods need to be removed. The Agricultural Produce Markets' Committee (APMC) laws need to be amended to allow buying and selling of commodities outside mandi premises without paying any mandi fee. There is need for rationalising stamp duty on the lines of the value added tax (VAT). Though, both VAT and stamp duty are state subjects, VAT is uniform across the country but stamp duty rates being levied by the states are different. Further, there is lack of clarity on the collection mechanism for stamp duties. Introduction of the uniform goods and services tax (GST) in the country will remove the remaining bottlenecks in creating a national market. States should also make it easy for traders, especially from outside the state, to register and trade in commodities.

Warehousing facilities and warehouse receipt financing

3.77 The reforms in agricultural marketing need to be complemented by the creation of adequate storage/warehousing infrastructure in the main agricultural markets. As creation of quality warehousing is not a very remunerative activity at present, the creation of storage infrastructure should be incentivised. To keep commodities in a quality warehouse will not only assure the market of good quantities and quality but this will also encourage warehouse receipt financing by banks at concessional rates. This in turn will reduce the cost of working capital and cost-of-carry of the commodity and will directly result in lower prices of commodities benefitting both consumers and the economy. Warehousing receipt financing should also be given infrastructure status. Correctly structured warehouse receipts provide secure collateral for banks by assuring holders of the existence and condition of agricultural inventories. Warehouse receipts can be used by farmers to finance their products and by processors to finance their inventories. The creation of a successful

warehouse receipt system facilitates trade volumes of both futures and spot markets. An electronic commodity registry maintaining electronic records of holdings and transfers of warehouse receipts/negotiable warehouse receipts (NWR) is essential for settling trades on commodity exchanges.

Advanced derivative products like weather index as insurance

3.78 The preceding sections discussed the need for crop insurance for farmers as one mechanism to ensure that farmers are protected from the vagaries of weather. Weather derivatives can be an important tool for hedging risks of production and yield from climate related risks. However, for such derivatives to be liquid requires the participation of informed clients and institutional players.

3.79 Under the provisions of the Forward Contracts (Regulation) Act (FCRA) 1952, indexes/options are not permitted to be traded on the commodity futures exchanges in India. Further, FCRA defines a forward contract as a contract for the delivery of goods, hence trading of intangibles such as weather and rain have not been allowed. However, with the decision of the Union Government to define commodity derivatives as securities in the recent budget and the merger of FMC with SEBI, it may now be possible to consider launching indexes/options including weather indexes on the exchanges.

Pension sector

3.80 The development of the pension sector has important socioeconomic implications both for the social security of the citizens and the economic prosperity of the country. Presently, only 12 per cent of the population in the country is covered by any form of old age income security. There are nearly 100 million people aged 60 years or more in India today and this number will triple by 2050. This large section of population will require some kind of assured income guarantee to sustain itself in the coming years. Hence, India's fiscal and financial

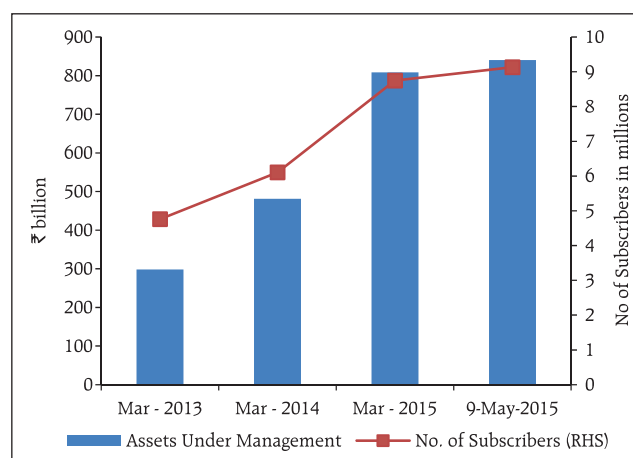
system has to be equipped in time to handle the rapid population ageing that will pan out in the next few decades.

Pension scheme for the unorganised sector

3.81 The government's broad vision on pension sector aims at providing affordable universal access to essential social security protection, in a convenient manner, linked to auto-debit facility from the bank account of a subscriber. Specifically, with a view to addressing longevity risks among workers in the unorganised sector who constitute 88 per cent of the total labour force and encouraging them to voluntarily save for their retirement, the government has launched a new initiative called the Atal Pension Yojana (APY), in May 2015. APY will focus on all citizens in the unorganised sector who join the National Pension Scheme (NPS), administered by the Pension Fund Regulatory and Development Authority (PFRDA) (Chart 3.10).

3.82 APY aims to provide an assured income level and sustainable retirement solution to the unorganised sector with flexibility and ease of operations that may be able to cover the challenges of seasonality of employment and indebtedness in old age. Under APY, subscribers will receive the minimum guaranteed pension of ₹1,000 per month, ₹2,000 per month, ₹3,000 per month, ₹4,000 per month and ₹5,000 per month, at the age of 60 years, depending on their contributions, which will vary according to the age at the time of joining APY. The minimum age for joining APY is 18 years while the maximum age is 40 years. Therefore, the minimum period of contribution by a subscriber under APY will be 20 years or more. The benefit of minimum pension will be guaranteed by the government. The central government will also co-contribute 50 per cent of the subscriber's contribution or ₹1,000 per annum, whichever is lower, to each eligible

Chart 3.10: Growth in national pension scheme



Source: PFRDA.

subscriber account for a period of five years, that is, from 2015–16 to 2019–20, who join NPS before 31 December, 2015 and who are not income tax payers. The existing subscribers of the Swavalamban Scheme will automatically move to APY, unless they opt out.

Streamlining the regulatory mechanism for pension funds

3.83 With a view to assessing the progress of the NPS and realigning the existing policy framework for pension funds, post notification of the PFRDA Act in 2014, an expert committee was constituted by the PFRDA for reviewing investment guidelines for NPS schemes in the private sector.⁴⁰ Some of its main recommendations include movement towards a more prudent investment regime, focus on financial literacy about pension products, a unified regulatory regime and a review of the taxation policy on exit for NPS (Box 3.4).

Rationale for a unified pension regime

3.84 The pension landscape in India is currently characterised by unregulated pension segments on the one hand and overlapping of the regulatory jurisdiction on the other. Illustratively, there are numerous superannuation funds and trusts, some of

⁴⁰ The committee headed by Shri. G.N. Bajpai, submitted its report in April 2015.

Box 3.4: Major recommendations of the Bajpai Committee on the Pension Sector

The committee has recommended movement towards a prudent investor regime involving harmonisation of investment guidelines for the private and government sectors; review of ceiling for each asset class; expanding the universe of instruments under each asset class and adding new asset classes; allowing the entire corpus of NPS to be managed by both private and public sector funds and allowing individual subscribers greater choice in their decision making.

The committee has also stressed on the need for strengthening the efforts on capacity building and financial literacy and monitoring of developments in capital markets while moving towards a prudent investment regime.

The other major recommendations relate to offering minimum assured returns' products by pension funds with suitable caveats and proper risk management processes, allowing pension funds (PFs) to market

the NPS product, developing a cadre of independent financial advisors, a framework for disclosures about the performance and rating of PFs and valuation of securities, among others.

The committee has also recommended a movement towards risk based supervision mechanism, including the elements of risk based scoring models, stress testing for PFs and a framework for regulatory intervention. It has also recommended a unified pension regime for all pension products, schemes and intermediaries under PFRDA.

Recognising the importance of the taxation policy and impact of differential tax treatment of withdrawals under other the Employee Provident Fund Organisation (EPFO) and exit under NPS, the committee has recommended an 'exempt, exempt, exempt' (EEE) tax regime for NPS, or at least parity of taxation with the EPFO scheme.

which are exempted by the Employee Provident Fund Organisation (EPFO), which currently fall outside the purview of any regulator. Further, registration of financial/savings products with nomenclature of 'pension products' is still possible under different regulatory dispensations even though there is clear parliamentary intent to carve out a separate jurisdiction for pension products under PFRDA. The current fragmented and heterogeneous pensions sector could pose some challenges for effective regulation and supervision resulting in regulatory arbitrage and regulatory gaps, which may have an impact on the stability of the system.

3.85 In keeping with the Parliament's mandate of regulatory carve-out for pension products, developing a contiguous pension system involving collection, investment, fund management, record keeping and pay outs for orderly growth of the pension sector under the single regulatory umbrella of PFRDA will be in order. In order to ensure development of the pension sector in general and of NPS in particular, it is essential that distortions across financial instruments and groups of assesses are resolved and

appropriate fiscal incentives are provided. Iniquitous tax treatment not only disadvantages one financial product against the other but it also creates avenues for tax arbitrage.

Synergies between EPFO and NPS

3.86 As a significant measure for promoting a contiguous pension system in the country, the government announced the option for employees to select either EPF/EPS or NPS in the Budget. With respect to EPF, an employee needs to be provided two options. An employee may opt for EPF or NPS and for employees below a certain threshold of monthly income, contribution to EPF is optional, without affecting or reducing the employer's contribution. While the details of amendments to the EPFO Act and PFRDA Act will be known in due course, this is a major step in providing a choice to subscribers in the organised sector who were earlier mandated to be a part of EPFO.

Financial market infrastructure

3.87 The progress made by India on its efforts to align its regulatory framework in accordance with

the Principles for Financial Market Infrastructures (PFMI) released by the Bank for International Settlements (BIS) and the IOSCO has been widely acknowledged. The latest round of 'annual global assessment' by the Committee on Payments and Market Infrastructures (CPMI) and IOSCO, on the implementation status of the PFMI in various countries, states that the Reserve Bank and SEBI have put in place all necessary regulations for the PFMI, and have a legal capacity to implement the responsibilities outlined under these global standards.⁴¹

3.88 The assessment which takes into account the regulations for central counter-parties, trade repositories, payment systems, central securities depositories and securities settlement systems observes that India was among a very few countries to achieve top ratings on all the major parameters.

Risk management policy at the depositories for securities markets

3.89 The PFMI, *inter alia*, lay emphasis on the need to have a robust risk management framework to identify, monitor and manage various risks emanating from multiple sources to its operations. Keeping this in view, SEBI constituted the Depository System Review Committee (DSRC) with a mandate to do an overall assessment of the existing depositories in India.

3.90 Based on DSRC's recommendations, depositories have been advised by SEBI⁴² to establish clear, comprehensive and well documented risk management frameworks which shall include an integrated and comprehensive view of risks to the depository including those emanating from

participants, participants' clients and third parties to whom activities are outsourced. The framework will also require listing of all relevant risks including technological, legal, operational, custody and general business risks and the ways and means of addressing these risks. A depository's risk-tolerance policy, systems, policies and procedures to identify, assess, monitor and manage the risks that arise in or are borne by the depository and the responsibilities as well as accountability for risk decisions and decision making process in crises and emergencies are also needed to be included in the framework.

Introduction of PVP settlement in the forex market (USD/INR segment)

3.91 The Clearing Corporation of India Limited (CCIL) has been providing guaranteed settlement of interbank forex transactions in USD/INR since November 2002. The settlement, while guaranteed, has not been entirely on a payment versus payment (PvP)⁴³ basis. In respect of inter-bank forex transactions in USD/INR, the time lag between the INR leg and USD leg posed potential Herstatt risk (principal risk) for members of the forex segment. To address this principal risk, CCIL was advised by the Reserve Bank to migrate to the 'payment versus payment' (PvP) mode of settlement in the USD/INR segment. The settlement of USD/INR in the PvP mode started from April 6, 2015. In order to align the settlement window of the two currencies and to provide banks sufficient time to fund their accounts and remit USD obligations towards CCIL, RTGS cut-off time has been extended up to 7.30 p.m. for interbank transfers. Some other features like online exposure checks and a default fund have also been introduced in the PvP mode of settlement.

⁴¹ BIS (2015), 'Implementation monitoring of PFMI: Second update to Level 1 assessment report', June. Available at: <http://www.bis.org/cpmi/publ/d111.pdf>

⁴² SEBI (2015b), 'Risk Management Policy at the Depositories', circular, January 12. Available at: http://www.sebi.gov.in/cms/sebi_data/attachdocs/1421059348668.pdf.

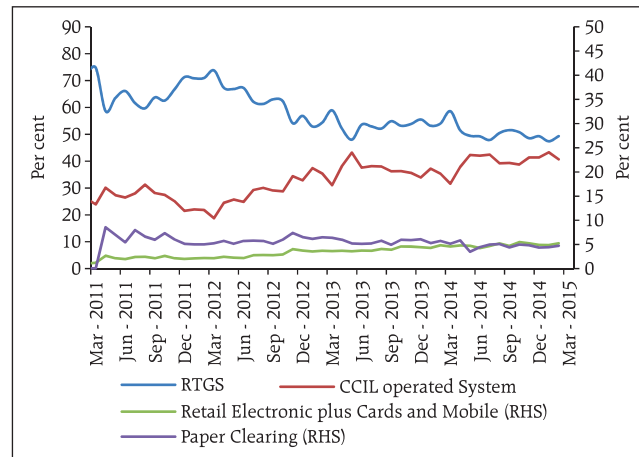
⁴³ PvP, Payment v/s Payment', is a mechanism in a foreign exchange settlement system which ensures that a final transfer of one currency occurs if and only if a final transfer of the other currency or currencies takes place.

Payment and settlement systems

3.92 Payment and settlement systems in the country continued to perform smoothly catering to increased demand from customers. The Reserve Bank's initiatives for mitigating risks and taking steps towards accessible, inclusive payment systems were some of the factors contributing to the increased usage of various non-cash payment modes (Chart 3.11). Retail payment systems, though not systemically important, have system-wide importance due to their sheer volume (Chart 3.12). This is a challenge given continuous innovations in this sphere. A number of initiatives have been taken for creating an enabling environment for furthering the reach and use of safe and efficient payment systems.

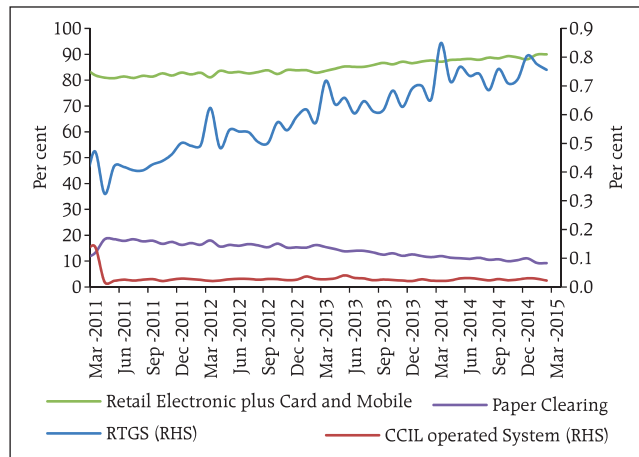
3.93 Acting as a catalyst the Reserve Bank is engaged in the process of setting up two nation-wide systems—Bharat Bill Payments System (BBPS) which is a centralised interoperable bill payment infrastructure providing an anytime anywhere bill payment environment for customers and the Trade Receivables Discounting System (TreDS) which will provide the institutional mechanism to facilitate financing of trade receivables of micro, small and medium enterprises (MSMEs) so as to alleviate the present constraints faced by these entities in meeting their liquidity requirements. BBPS guidelines have been issued and the National Payments Corporation of India (NPCI) which has been identified as the central unit to set up uniform standards and processes for bill payments in the country is preparing the procedural guidelines for BBPS so that they can be authorised under the Payment and Settlement Systems Act, 2007. In the case of TReDS, applications received for authorisation under the Payment and Settlement Systems (PSS) Act 2007, to set up and operate TReDS are currently being processed.

Chart 3.11: Distribution of settlement systems (value)



Source: RBI.

Chart 3.12: Distribution of settlement systems (volume)



Source: RBI.

3.94 Further, in order to provide the necessary fillip to mobile banking efforts leveraging on the high mobile density that exists in the country, the Reserve Bank has engaged with stakeholders to examine the issues and challenges in successfully propagating this medium of payment, and necessary guidelines have been issued to banks on best practices for customer enrolment and grievance redressal.