Chapter VII

Financial Stability

Introduction

7.1 Financial stability has emerged as a major objective of public policy in developed and emerging economies in recent years, and particularly in recent months. Several factors, such as the increased frequency and high cost of financial crises, emergence of complex and new exotic financial instruments and significant growth in the volume of financial transactions, have led to this greater focus on financial stability. During the past year and a half, financial stability has occupied a centre stage in policy circles in the wake of the current global financial crises with wide ramifications. It is widely agreed that recurrence of systemic financial crises, *viz.*, banking, corporate, currency and sovereign debt crises, have negative effects on economic growth and lead to significant losses to investors. A vast body of literature, both empirical and analytical, suggests that in addition to many other important factors, the performance and long-run economic growth and welfare of a country are related to its degree of financial development measured by factors such as size, depth, access, efficiency and stability of a financial system, including its markets, intermediaries, range of assets, institutions and regulations.

7.2 As there is no general agreement on the definition of financial stability and systemic risk, both the terms tend to acquire a contextual meaning, and the recent developments in the international financial markets have highlighted new challenges leading to a deeper examination of issues causing instability as well as crisis management tools. Financial stability does not mean absence or avoidance of crisis, but presence of conditions conducive to efficient functioning of the financial system without serious disruption[1]. Financial stability involves smooth functioning of the financial system as a whole, both in normal conditions and in periods of stress. While under normal conditions, the financial system can be considered to be stable if it is generally free from imbalances, in periods of stress, financial stability would depend on the ability of financial markets (in terms of infrastructure and organisation) and participants in these markets (intermediaries, investors, financial providers) not only to absorb shocks, but also to work properly (*i.e.*, without major/lasting disruptions) when confronted with an unexpected shock of any nature (such as burst, bubble or terrorist attacks). Under this approach to understanding financial stability, there are two dimensions involved: *ex ante*, that of preventing the building up of imbalances in financial markets, and *ex post*, that of ensuring the ability of financial markets to accommodate the correction of these imbalances. Furthermore, in a stable financial system, money is expected to carry out its function as a means of payment and as a unit of account properly, while at the same time, the financial system can properly perform its role of mobilising savings, diversifying risks and allocating resources[2].

7.3 Different central banks have set out some working definitions of financial stability

[1] Reddy, Y.V., 2006, *Financial Sector Reform and Financial Stability*, at the 8th Global Conference of Actuaries held in Mumbai.

[2] Oosterloo, S. and J. de Haan, 2005, 'Arrangements for Financial Stability in OECD and EU Countries', in: Doug Evanoff & George Kaufman (eds.), *Systemic Financial Crises, Resolving Large Bank Insolvencies*, World Scientific Publishing Company.

in their publications. Further, for maintaining financial stability, central banks across countries have a wide range of legal, institutional and policy frameworks, and policy instruments at their disposal, which differ from country to country. Nevertheless, the major common elements that contribute to financial stability are the oversight of the financial infrastructure, in particular payments systems; regulation and supervision of financial institutions and markets; crisis management and provision of liquidity; and macrofinancial stability encompassing monitoring not only the behaviour of all important players in the financial sector but also non-financial sector balance sheets as well as those of the governments.

7.4 The financial turmoil that began to unfold in August 2007 - widely known as the sub-prime crisis - has brought financial stability issues to the forefront of policy discussions. The turmoil was a fallout of an exceptional credit boom and leverage in the financial system. On a hindsight, the present crisis appears to be a result of a macroeconomic environment with a prolonged period of low interest rates, high liquidity and low volatility, which led financial institutions to underestimate risks, a breakdown of credit and risk management practices in many financial institutions, and shortcomings in financial regulation and supervision[3]. A slowdown in the US real estate market triggered a series of defaults and this snowballed into accumulated losses, especially in the case of complex structured securities. The US subprime crisis has led to both the strained conditions of financial markets and the slowdown of the broader economy. The US economy continues to confront substantial challenges, including stresses in financial markets, a weakening labour market and deteriorating economic activity. The problems intensified significantly around mid-September 2008, when major losses led to failure of major financial institutions. The recent troubles at Lehman Brothers, Merrill Lynch, and Fannie Mae and Freddie Mac suggest the deep rooted problem in the global financial markets that the authorities have to address.

7.5 The ongoing financial turmoil took a serious turn when major financial institutions started experiencing extreme degrees of difficulty. Bear Stearns was the big first wall street investment banks of the five to collapse in March 2008, followed by the filing of chapter 11 bankruptcy petition by Lehman Brothers Holdings inc. and the sale of Merrill Lynch to Bank of America in September 2008. The remaining two, Goldman Sachs and Morgan Stanley, have abandoned their once-cherished investment bank business model to become bank holding companies to secure greater Fed protection and to soothe negative market sentiments. This was soon followed by the takeover of the sixth largest bank, Wachovia, by the CitiGroup. The recent turn of events prompted the US Government to come out with a $700 billion bail out package for banks to buy the distressed assets. Full prudential supervision and regulation at the hands of the central bank and the Federal Deposit Insurance Corporation would provide them access to permanent liquidity and funding by the Fed. Though the Fed had allowed investment banks to access discount window financing since Bear Stearns crumbled, this source was set to close at an unspecified point in 2009. The Securities and Exchanges Commission (SEC) was previously responsible for the supervision of the investment banks under the voluntary consolidated supervised enterprises regime. Lighter regulation of investment banks had enabled the industry reap greater rewards than their commercial banks counterparts in the boom preceding the

[3] Strauss-Kahn, Dominique, 2008, *Lessons from the Financial Market Crisis: Priorities for the World and for the IMF*, at Indian Council for Research on International Economic Research (ICRIER), New Delhi, India on February 13.

credit crisis. But the crunch has revealed the drawbacks of the industry's high-risk strategy. The shocks in the US financial system have reverberated in some European countries as well such as the UK, Switzerland and Germany. Though the direct impact on India and other Asian emerging market economies (EMEs) was muted, the indirect impact has been significant.

7.6 The initial impact of global financial contagion in India, however, has been limited for a variety of reasons. India's growth process has been largely domestic demand driven and its reliance on foreign savings has remained around 1.5 per cent of GDP in the recent period. It also has a comfortable level of forex reserves. The credit derivatives market is in an embryonic stage; the originate-to-distribute model in India is not comparable to the ones prevailing in advanced markets and there are restrictions on investments by residents in such products issued abroad. Regulatory guidelines on securitisation do not permit immediate profit recognition. However, some impact has been felt through the credit, equity and the foreign exchange markets. Risk aversion, deleveraging and frozen money markets have not only raised the cost of funds for Indian corporates, but also its availability in the international markets. This additional demand for funds spilled over to the domestic credit market. Reduced investor interest in emerging economies has led to reversal of portfolio flows affecting the equity and the foreign exchange markets. The impending recession in the US and other advanced economies would also impact Indian exports and the growth momentum. Several measures have been initiated to mitigate the impact of global financial crisis on the domestic financial markets and its spillover impact on the real economy.

7.7 The global financial turmoil has reinforced the importance of putting special emphasis on preserving financial stability. Financial stability in India has been achieved through perseverance of prudential policies which prevent institutions from excessive risk taking, and financial markets from becoming extremely volatile and turbulent[4]. With increasing priority being given to financial stability, the central task for the conduct of monetary policy has become more complex and challenging than before. The current challenge is to strike an optimal balance between preserving financial stability, maintaining price stability, anchoring inflation expectations, and sustaining the growth momentum[5]. The relative emphasis between these objectives has varied from time to time, depending on the underlying macroeconomic conditions.

7.8 The recent developments in the global financial markets have been closely followed by market participants, central bankers, supervisors, multilateral institutions, political leaders, analysts, academicians, and also the general public. The ongoing debates cover several stability issues in the areas of regulation and supervision of institutions and markets, risk management strategies and practices of institutions, safety net and liquidity backstops. Simultaneously, the vexed issue of light *versus* tight regulation have also been receiving considerable attention. Financial stability in the current context is also being viewed in terms of a trade-off between risk and innovation/return. A financial system that is heavily regulated and supervised may be very stable and not prone to experiencing financial crises in contrast to a financial system that is very free and innovative and which is lightly regulated and supervised. A controlled system to its disadvantage could have lower financial

[4] Mohan, R., 2008, *Global Financial Crisis and Key Risks: Impact on India and Asia*, remarks at the IMF-FSF High-Level Meeting on the Recent Financial Turmoil and Policy Responses, Washington D.C., October 9.

[5] Governor, Dr. D. Subbarao's Press Statement on Stance of Monetary Policy for the Remaining Period of 2008-09, October 24, 2008.

development and innovation compared with a free and innovative system that increases returns, diversifies risks, and better allocates resources to the highest-return investments. The latter, however, may eventually become unstable and trigger credit booms and asset bubbles that could severely affect growth, returns and welfare. Though there is some trade-off between the stability of the financial system and its degree of innovation and sophistication, financial stability remains an important input in the process of financial development[6]. While there is a need for regulation staying ahead of the curve through continuous upgradation of skills and instruments, it is important to exercise caution so that regulation does not get so stringent as to stifle innovation.

7.9 Keeping in view the need to enhance the resilience of the global system, several menus of prescriptions have been proffered for the consideration of the policymakers, which mostly cover issues such as enhancing transparency, strengthening risk management frameworks including the governance arrangements in banks and financial institutions, refining Basel II, reforming deposit guarantee schemes, regulating rating agencies, and modifying monetary policymakers' operational frameworks. The policy dilemmas have become more acute at the current juncture. There are also calls for fundamental rethinking on macroeconomic, monetary and financial sector policies to meet the new challenges and realities alongwith inflation and structural shifts in the international financial architecture involving an enhanced degree of coordination among monetary authorities and regulators. A review of the policies relating to financial regulation, in a way, needs to address both the acute policy dilemmas in the short run and a fundamental rethink on broader frameworks of financial and economic policies over the medium-term.

7.10 The chapter reviews and analyses the developments in the Indian financial system from a financial stability perspective, particularly during 2007-08 and April-October 2008. The chapter is organised into five sections. Following the introductory section, section 2 presents an assessment of the performance of the Indian financial system covering financial institutions, financial markets as well as the payment and settlement systems. Under financial institutions, the commercial and co-operative banks, financial institutions, and non-banking financial companies are discussed, while financial markets cover developments in the money, foreign exchange and Government securities markets, besides the capital market. Section 3 identifies and discusses various risks emerging from global and domestic factors that may have a bearing on maintaining financial stability in India. The recent financial turbulence, as well as the challenges and issues brought out by the recent experience are also dealt with in detail in this section. Section 4 presents the ways of mitigating such risks emerging in the evolving macrofinancial conditions. Section 5 presents an overall assessment of the financial stability conditions in India.

2. An Assessment of the Indian Financial System

7.11 The Indian financial system comprises a wide network of financial institutions, financial markets and financial infrastructure. The financial institutions in India mainly consist of commercial banks (including regional rural banks - RRBs), urban co-operative banks, rural co-operative banks, (which, in turn, comprise short-term co-operative credit structure (state co-operative banks and district central co-operative banks) and long-term credit structure (state co-operative agriculture and rural development banks and primary co-operative agriculture

[6] *The Financial Development Report 2008*, World Economic Forum.

and rural development banks)], non-banking financial companies, insurance companies and mutual funds. A major feature of the financial system is the divergence in regulation and supervision over different institutions and segments of the financial markets.

7.12 Scheduled commercial banks form the bedrock of the Indian financial system accounting for around three-fourths of the total assets of all financial institutions, and their regulation and supervision falls under the ambit of the Reserve Bank as mandated in the Banking Regulation Act, 1949 and the Reserve Bank of India Act, 1934. The main elements of the regulatory framework, which have evolved from time to time, comprise, *inter alia*, prudential and exposure norms, accounting standards and disclosure norms. The Reserve Bank also regulates primary dealers (PDs), select all-India financial institutions (AIFIs) and non-banking financial companies (NBFCs). Urban co-operative banks (UCBs) are regulated by the Reserve Bank and the respective State Governments/ Central Government. In November 1994, the Board for Financial Supervision (BFS) was constituted comprising members of the Reserve Bank Board with a variety of professional expertise to exercise 'undivided attention to supervision' and ensure an integrated approach to supervision of commercial banks, AIFIs, NBFCs, UCBs and PDs. As on March 31, 2008, the BFS had supervisory jurisdiction over 79 scheduled commercial banks (62,099 branches), 4 local area banks, 91 regional rural banks (RRBs), 1,770 urban co-operative banks, 12,834 non-banking financial companies, 4 financial institutions (FIs) and 19 primary dealers. Insurance companies are regulated by the Insurance Regulatory and Development Authority (IRDA) and mutual funds and securities market by the Securities and Exchange Board of India (SEBI). In this section, developments in financial institutions, financial markets and financial infrastructure during 2007-08 and 2008-09 (period for which data are available) are analysed from the standpoint of financial stability.

Financial Institutions

7.13 The Reserve Bank continued to build a regulatory and supervisory architecture in line with the international best standards with country-specific adaptations with the ultimate objective of improving the efficiency and performance of the Indian financial sector. Various regulatory and supervisory measures were initiated by the Reserve Bank relating to banks and other financial institutions during 2007-08 (for policy developments in commercial banking, co-operative banking and non-banking financial institutions refer to Chapter II, IV and VI, respectively). The year witnessed major progress in the implementation of the New Capital Adequacy Framework (Basel II). The Pillar II guidelines were issued during the year. Certain amendments were also carried out in the framework issued earlier. Newer avenues of raising capital were provided to banks to accord them with greater flexibility in meeting the Basel II requirement. Special emphasis was laid upon liquidity and asset-liability management. Significant measures were also undertaken in the areas of anti-money laundering (AML) and know your customer (KYC) guidelines. Important initiatives in the area of corporate governance included guidelines on corporate social responsibility, sustainable development and non-financial reporting and guidelines on 'fit and proper' criteria for elected directors on the boards of public sector banks[7]. Policy initiatives relating to customer service included guidelines for recovery agents and grievance redressal mechanism.

[7] Fit and proper criteria for elected directors on boards of nationalised banks were issued on November 1, 2007, and fit and proper criteria for elected directors on board of the State Bank of India and its associate banks were issued on November 14, 2007.

7.14 UCBs were provided with greater business opportunities and capital raising options. Of the financial institutions supervised by the Reserve Bank, Industrial Finance Corporation of India Ltd. (IFCI) and Tourism Finance Corporation of India Ltd. (TFCI) were restored the NBFC status during the year. Industrial Investment Bank of India (IIBI) is in the process of being wound up. Important developments relating to NBFCs included formulation of regulatory framework for mortgage guarantee companies and various measures in the area of prudential guidelines and customer service. The efforts to strengthen the NBFCs continued with a focus on systemically important financial institutions within the sector.

7.15 The Board for Financial Supervision reviewed the inspection findings in respect of commercial banks/urban co-operative banks, periodical reports on critical areas of functioning of banks such as reconciliation of accounts, frauds monitoring, overseas operations, financial position of banks under monthly monitoring and issued a number of directions with a view to strengthening the functioning of banks. Future set up of local area banks, disclosure of supervisory ratings of banks and banks' exposure to the real estate sector were some other important issues examined by the BFS. A review of the role and set up of the financial institutions was undertaken with a view to providing clarity on their regulatory and supervisory architecture and their emerging role in the financial sector. Small Industries Development Bank of India (SIDBI) was advised to increase the risk weights on its exposure to State Financial Corporations (SFCs), make full provisioning in respect of SFCs which had defaulted even after extension of restructuring/one time settlement (OTS) packages and revise the norms for asset classification to 'borrower wise' instead of 'facility wise' in respect of its exposures to SFCs. Supervisory actions for UCBs were designed on the basis of Task Force for Urban Co-operative Banks (TAFCUB)'s recommendations. To contain the systemic risks arising out of the NBFCs sector, a fair practice code was designed, asset finance company (AFC) was introduced as a new class of NBFC, and the BFS deliberated upon the future set up of SIDBI and future framework of NHB.

7.16 Owing to the various initiatives taken since the early 1990s, the Indian financial system has become robust over the last few years and has displayed resilience to withstand the shocks. The commercial banking system in India has become strong, sound and competitive following the various measures taken to bring it in line with the global best practices. However, as the RRBs and the co-operative banks lagged behind in terms of soundness and efficiency after strengthening the commercial banking segment, the Reserve Bank and the Government in recent years have been bestowing greater attention to them. The banking and non-banking institutions are performing in a competitive environment and their regulatory framework is now aligned with the international best practices. The biggest achievement was in the case of UCB sector, wherein treading the path suggested in the vision document for UCBs 2005, the restructuring of the UCB sector succeeded in bringing about substantial improvement in the performance of the sector.

Scheduled Commercial Banks

7.17 The profitability of the scheduled commercial banks in India has improved over the years. Despite upturn in interest rate cycle in the recent period, SCBs have been able to maintain their return on assets. A significant improvement in the asset quality is reflected in the decline in gross and net NPA ratios, which are now comparable with the international standards. The strong capital position of the banking sector, which is significantly above the regulatory requirement of 9 per cent, has provided them with the much needed cushion to withstand shocks and other emerging risks. The performance of SCBs continued to improve during 2007-08 with return on assets (RoA) of SCBs showing an improvement to 1.0 per cent (from 0.9 per cent), capital adequacy ratio of SCBs improving further to 13.0 per cent (from 12.3 per cent) and gross NPA ratio declining to 2.3 per cent (from 2.5 per cent) (refer Chapter III for details).

Soundness and Efficiency Indicators: India vis-à-vis Other Countries

7.18 Several balance sheet and profitability indicators suggest that the Indian banking sector now compares well with the global benchmarks. The Indian banking system has been assessed in international perspective by comparing various financial and soundness indicators such as return on total assets, non-performing loans ratio and capital levels. The assessment could provide an indication of the areas where the Indian banking system needs to be strengthened further.

7.19 One of the most widely used indicators of profitability is RoA, which indicates the commercial soundness of the banking system. RoA of Indian scheduled commercial banks was at 1.0 per cent at end-March 2008, which is line with the international standards. Globally, the range varied from 0.2 per cent to 4.2 per cent in 2008. The RoA in several advanced countries and some emerging market economies were less than one per cent (Table VII.1).

7.20 Quality of assets of banks as reflected in the ratio of non-performing loans (NPLs) to total advances is also an important banking soundness indicator from the financial

Table VII.1: Benchmarking of Indian Banking Sector-2008

(Per cent)

Country	Return on Assets	Gross NPL to Gross Adv.	CRAR	Provisions to NPL	Capital to Assets
1	2	3	4	5	6
India	1.0	2.3	13.0	52.4	6.3
Emerging Markets					
Argentina	1.7	2.8	16.8	122.3	12.6
Brazil	2.8	2.9	18.1	181.7	9.5
Mexico	2.9	2.1	16.0	184.0	14.1
Korea	0.9	0.8	12.0	183.8	8.8
S. Africa	1.4 *	1.4 *	12.8 *	-	7.9 *
Developed Countries					
US	0.6	1.7	12.8	88.9	10.2
UK	0.4 *	0.9 *	12.6 *	54.6 ^	8.9 ^
Japan	0.3	1.4	12.3	26.4	4.3
Canada	0.3	0.9	12.3	36.7	5.3
Australia	1.0 *	0.3	10.5	128.6	4.1
Memo Item:					
Global Range					
Minimum	0.2	0.3	10.0	26.4	3.5
	(Montenegro)	(Australia)	(Sweden)	(Japan)	(Netherlands)
Maximum	4.2	13.2	28.7	187.5	22.7
	(Moldova)	(Bangladesh)	(Moldova)	(Chile)	(Armenia)

- : Not available.
* : Data pertains to 2007.
^ : Data pertains to 2006.
Source : IMF, Global Financial Stability Report, April 2008.

stability perspective. A low level of NPL ratio not only reflects the prudent business strategy followed by the banking system, but is also indicative of the conducive recovery climate and the legal framework for recovery of loans. Banks with adequate credit risk management practices are expected to have lower non-performing loans. In India, several measures taken by the Government and the Reserve Bank have enabled SCBs to substantially reduce their level of NPLs from 15.7 per cent at end-March 1997 to about 11 per cent at end-March 2001 and further to 2.3 per cent at end-March 2008. The global range for NPLs varied widely between 0.3 per cent and 13.2 per cent in 2008. The ratio of provisioning to NPLs reflects the ability of a bank to withstand losses in asset value. A low ratio of provisioning to NPLs makes the banking system vulnerable to shocks. The provisioning to NPL ratio of Indian banks was 52.4 per cent at the end-March 2008, as against the global range of 26 per cent and 187 per cent.

7.21 Bank capital acts as the ultimate buffer against losses that a bank may suffer. The minimum capital to risk-weighted asset ratio (CRAR) has been specified at 8 per cent by the Basel Committee on Banking Supervision (BCBS) under both the Basel I and Basel II frameworks. In the Indian context, the overall capital adequacy of the SCBs at 13.0 per cent as at end-March 2008, was well above the Basel norm of 8 per cent and the stipulated norm of 9 per cent for banks in India. The CRAR of 56 banks was over 12 per cent, of 21 banks was between 10-12 per cent, while those of the remaining two banks was between 9 and 10 per cent. The CRAR of Indian banks was comparable with most emerging markets and developed economies. The global range of CRAR in 2008 varied between 10.0 per cent and 28.7 per cent. A capital to asset ratio is another simple measure of soundness of a bank. The lower the ratio, the higher is the leverage and greater vulnerability of a bank. Globally, the ratio varied between 3.5 per cent to 22.7 per cent in 2008, while Indian banks' capital to assets ratio at 6.3 per cent suggested a lower degree of leverage and higher stability.

7.22 The financial sector in India is sound and healthy. Indian banks do not have direct financial exposure to the US sub-prime assets. Foreign subsidiaries and foreign branches of Indian banks have suffered some mark-to-market losses on financial instruments due to the general widening of credit spreads. These losses are modest relative to the size of their business for which adequate provisioning has been made.

7.23 Consequent upon filling of bankruptcy under Chapter 11 by Lehman Brothers, all banks were advised to report the details of their exposures to Lehman Brothers and related entities both in India and abroad. Out of 77 reporting banks, 14 reported exposures to Lehman Brothers and its related entities either in India or abroad. An analysis of the information reported by these banks revealed that most of the exposures reported by the banks pertained to subsidiaries of Lehman Bros Holdings Inc. which are not covered by the bankruptcy proceedings. Overall, these banks' exposure especially to Lehman Brothers Holding Inc. which has filed for bankruptcy is not significant and banks are reported to have made adequate provisions.

Urban Co-operative Banks

7.24 The UCB sector has witnessed significant improvement as a result of effective implementation of the suggestions made in the Vision Document released in March 2005. The first memorandum of understanding signed with Andhra Pradesh State Government in 2005 marked a new beginning for the co-operative sector. With the signing of Memoranda of Understanding (MoUs) between the Reserve Bank and the respective State Governments, a long standing issue of dual control of urban co-operative banks was attempted to be addressed. Between June 2005 and October 20, 2008, MoUs have been signed with 23 State Governments and with the

Central Government in respect of multi-State UCBs, out of which 6 States signed MoU during 2007-08. In terms of the MoUs, Task Force on Urban Co-operative Banks (TAFCUB) has been constituted in each of the 23 States and also with the Central Government in case of multi-State UCBs. In all 1,745 UCBs (98.6 per cent) have been covered under the MoUs representing 99.2 per cent of deposits of the sector. The mechanism of TAFCUBs has been able to restore the confidence in the UCB sector and there has been significant improvement in its operation and financial performance. A number of measures to strengthen the sector were initiated in the past five years. The option of merger/amalgamation, wherever necessary, was made available for revitalising and rehabilitating weak scheduled UCBs; consideration given to requests for shifting branches from one city to another within the same State, subject to certain conditions, and further professionalisation of their managements.

7.25 The above mentioned initiatives brought about a turnaround in the performance of UCBs. The number of Grade III and Grade IV UCBs taken together, implying weakness/ sickness in UCBs, declined from 725 as at end-March 2005 to 496 as at end-March 2008[8] (refer Chapter IV for details).

7.26 The overall asset quality of UCBs also improved with the gross NPAs of the UCBs declining from 23.2 per cent of total advances in 2005 to 16.4 per cent in 2008. The increased public confidence in the UCB sector is reflected in the growth in their deposits by 14.1 per cent during 2007-08 as compared with the increase of 6.4 per cent during 2006-07 and 8.6 per cent in 2005-06, and against the negative growth of 4.8 per cent in 2004-05.

7.27 The increased comfort of coordinated supervision/regulation in States that have signed MOUs enabled the Reserve Bank to provide additional business opportunities to the eligible UCBs in such States and to the multi-State UCBs. These facilities included permission to set up currency chests, to sell mutual fund products, conduct insurance business on a non-risk participation basis, open new automated teller machines (ATMs), convert extension counters into branches and deal in foreign exchange as authorised dealers in categories I and II. Encouraged by the performance of the sector, the Reserve Bank decided to issue fresh licences from July 2008. As announced in the Annual Policy Statement for 2007-08, financially sound UCBs in such States were also permitted to open new branches, a facility which was discontinued in 2004. UCBs have been an important segment of Indian banking, and a healthy UCB sector is expected to play a vital role in strengthening competition and imparting stability to the Indian financial system (Box VII.1).

Non-Banking Financial Companies

7.28 NBFCs as an important segment of the financial sector play a crucial role in enhancing credit delivery to the dispersed, underbanked and underserviced sections of the economy. Apart from ensuring that the public deposit taking companies and systemically important non-deposit taking companies were well regulated, the Reserve Bank also initiated measures to further strengthen their asset base. The high dependence of NBFCs on banks for sources of funds raises the systemic risk in the financial system. In recent years, the Reserve Bank has taken measures to bring the regulatory norms for non-banks closer to those of banks, and also to make them uniform for deposit taking NBFCs (NBFCs-D) and non-deposit taking NBFCs (NBFCs-ND) (refer Chapter VI for details). Apart from providing a level playing field and reducing the 'regulatory arbitrage', these measures would also help reduce systemic risk in their operations, and thereby promote financial stability.

[8] The system of supervisory grading of UCBs into four grades - I to IV, introduced during 2005-06 is based on objective criteria defined in terms of CRAR, net NPA *etc*. Grade I refers to sound banks having no supervisory concerns. Banks in grades III and IV broadly correspond to 'weak' and 'sick' category under the earlier norms.

Box VII.1: Co-operative Banks and Financial Stability

Given the significant role played by urban co-operative banks in providing banking services to the middle and lower income people of India, their contribution to increasing financial deepening can hardly be over emphasised. Furthermore, co-operative banks in the Indian financial system mitigate credit-rationing to certain market segments, particularly SMEs. They could also be considered to have positive effects on stability by way of instilling greater competition.

The presence of co-operative banks also seems to have a positive effect on the solvency of the banking system. Using data from several banking systems, Hesse and Cihàk (2007) found that: (i) co-operative banks are more stable than commercial banks due to the lower volatility of their returns, and that (ii) the overall impact of a higher co-operative presence on bank stability is positive. In addition co-operative banks have higher capital ratios.

Hesse and Cihak find, somewhat surprisingly, that co-operative banks in advanced economies and emerging markets are more stable than commercial banks, as reflected in their high z-scores. The z-score measures the number of standard deviations a return realisation has to fall in order to deplete equity, under the assumption of normality of banks' returns. A higher z-score corresponds to a lower upper bound of insolvency risk - a higher z-score therefore implies a lower probability of insolvency risk.

This high z-scores of co-operative banks is due to much lower volatility of the co-operative banks' returns, which offsets their relatively lower profitability and capitalisation. This finding is quite robust with respect to various modifications in the measurement of volatility and z-scores. This observed lower variability of returns, and therefore the higher z-scores, are most likely caused by the fact that co-operative banks in normal times pass on most of their returns to customers, but are able to recoup that surplus in weaker periods. To some extent, this result could also reflect the mutual support mechanisms that many co-operative banks have created. Other risk measurements such as the value at risk concept or bank risk based on stock market data (distance-to-default) are not feasible since co-operatives are seldom listed on the stock exchanges (except for demutualised co-operatives).

A greater presence of co-operative bank could mean less space for commercial banks in the retail market and, therefore, their greater reliance on less stable revenue sources such as corporate banking or investment banking. This could have contributed to lower z-scores for commercial banks. This finding is consistent with Goodhart's (2004) hypothesis that the presence of non-profit-maximising entities in a financial system can weaken its stability. This is a reflection of the fact that the direct effect of higher z-scores in co-operative banks is largely offset by the negative impact of a higher co-operative bank presence on z-scores in commercial banks. The overall impact of a higher presence of co-operative banks on banking sector stability was thus slightly positive on an average, but insignificant in some specifications. While interpreting the results, it is important to keep in view some caveats of the z-score such as its reliance on accounting data and its focus on capital and profits rather than, say, liquidity or asset quality. Some possible alternatives to the z-scores, such as ratings of co-operative banks were also not found to be substantially worse than those for commercial banks.

Co-operatives typically face corporate governance issues that are larger than, and in some cases absent from, commercial banks (Caves and Fish, 2006). Among them is the presence of an owner-less endowment since members of co-operatives are only invested with the notional value of their shares and have no right to the accumulated capital. Furthermore, there is a collective action problem which might lead to empire building by the management. The governance framework of co-operative banks may hamper raising capital, particularly at time of distress, complicating the bank resolution process - especially for large banks - and may not provide adequate incentives to control the banks' management (Gutiérrez, 2008).

Co-operative banks can derive important benefits by forming networks, as it allows the pursuit of economies of scale and scope, and the provision of a safety net or mutual support mechanism. However, the more complex structure could also create new challenges for financial stability. Desrochers and Fischer (2005), in a cross-country survey on the level of integration of systems of financial co-operatives, note that lateral contracts between co-operative partners involve risks that counterparts will behave opportunistically to appropriate the rent generated by the alliance.

References:

Hesse, Heiko and Martin Cihák. *2007. "Cooperative Banks and Financial Stability." IMF Working Paper.* WP/07/2. January.

Allen, Franklin. and Douglas Gale. 2004. "Competition and Financial Stability." *Journal of Money, Credit and Banking.* Vol. 36. No. 3. pp. 453–80.

Barth, James R., Gerard Caprio Jr. and Ross Levine. 1999. "Banking Systems Around the Globe: Do Regulation and Ownership Affect Performance and Stability?" *World Bank Policy Research Working Paper No.* 2325. Washington: World Bank.

Cuevas, Carlos and Klaus Fischer. 2006. "Co-operative Financial Institutions: Issues in Governance, Regulation, and Supervision." *World Bank Working Paper No.* 82. Washington: World Bank.

Gutiérrez, Eva. 2008. "The Reform of Italian Co-operative Banks: Discussion of Proposals." *IMF Working Paper* 74. March.

Goodhart, C.A.E. 2004. "Some New Directions for Financial Stability." *The Per Jacobsson Lecture.* Basel: Bank for International Settlements.

7.29 An analysis of the sources of funds for NBFCs revealed that a few NBFCs relied heavily on funds from debt-oriented mutual funds, which subscribed to Commercial papers, non-convertible debentures and other structured products issued by them, thus creating an unsustainable asset-liability structure with short-term funds financing long-term assets. As mutual funds faced redemption pressures since June 2008 with several investors, especially institutional investors, rollover of maturing short-term instruments of NBFCs became difficult and fresh subscriptions dried up. Besides, the liquidity crunch faced by some banks made them reluctant to lend to NBFCs. In view of the liquidity constraints faced by NBFCs, the Reserve Bank initiated several measures to enhance availability of liquidity to NBFCs such as permitting NBFCs-ND-SI to augment their capital funds by issue of perpetual debt instruments (PDI) and as a temporary measure, permitting NBFCs-ND-SI to raise short-term foreign currency borrowings under the approval route, subject to certain conditions. The Reserve Bank also permitted banks, on a temporary basis, to avail liquidity support under the liquidity adjustment facility (LAF) window through relaxation in the maintenance of statutory liquidity ratio (SLR) to the extent of up to 1.5 per cent of their NDTL to be used exclusively for the purpose of meeting the funding requirements of NBFCs and mutual funds.

7.30 In the light of international developments and increasing exposure of banks to systemically important NBFCs, the regulations in respect of capital adequacy, liquidity and disclosure norms were reviewed in August 2008. Besides enhancing the CRAR from March 2009, a reporting mechanism regarding ALM was introduced for NBFCs-ND SI which would commence from January 2009 (refer Chapter VI for details).

Mutual Funds

7.31 Mutual funds have emerged as an important medium for directing individual savings to the capital market, thereby facilitating small retail investors' participation in the capital market. However, over the years, the corporates also invested heavily in units of mutual funds, partly due to tax benefits. The share of individuals in the total net asset value of all mutual funds declined to 37 per cent at end-March 2008 from 42 per cent in the previous year, while that of corporates/ institutions/others rose to 57 per cent from 50 per cent in the previous year. Net funds mobilised by mutual funds (net of redemptions) during 2007-08 rose sharply by 63.6 per cent to Rs.1,53,801 crore (Table VII.2). Accordingly, the net assets under management of mutual funds industry increased by 54.8 per cent during 2007-08. A significant increase in net mobilisation of resources by mutual funds was partly due to 'tax arbitrage'. While interest from bank deposits is taxable at the hand of the depositors at the eligible marginal rate of taxation, barring long-term deposits of 5 years and above which enjoy Section 80-C benefits, investments in equity oriented mutual fund schemes are exempt from long-term capital gains, while short-term capital gains are taxed at 15 per cent[9].

7.32 In line with the recent trend, bulk of the net resources mobilised by mutual funds during 2007-08 (67.5 per cent) were constituted by income/debt-oriented schemes, while growth/equity-oriented schemes accounted for 30.5 per cent (Table VII.3). The net assets under income/debt-oriented schemes increased sharply by 61.7 per cent during 2007-08 over the previous year, while net assets under growth/equity-

[9] Equity-oriented funds (with more than 60 per cent of the funds in equity shares of domestic companies) of mutual funds are exempt from tax on income and dividend distribution and long-term capital gains. The tax treatment in respect of other than equity-oriented funds of the mutual funds is as follows: (i) dividend distribution from the money market and liquid funds is subject to 25 per cent tax plus surcharge. (ii) For schemes other than money market and liquid schemes, dividend distribution tax is 12.5 per cent plus surcharge for distribution made to individuals or HUF and for any other person at 20 per cent plus surcharge. (iii) Long-term capital gains to resident holders in chargeable to 20 per cent after factoring the cost of inflation index or tax at the rate of 10 per cent without indexation, whichever is lower.

Table VII.2: Resource Mobilisation by Mutual Funds

(Rs. crore)

Category	2006-07			2007-08		
	Gross Mobilisation	Net Mobilisation@	Net Assets*	Gross Mobilisation	Net Mobilisation@	Net Assets*
1	2	3	4	5	6	7
Private Sector	15,99,873	79,038	2,62,079	37,80,753	1,33,304	4,15,621
Public Sector	1,96,340	7,621	28,725	3,37,498	9,820	41,123
UTI Mutual Fund	1,42,280	7,326	35,488	3,46,126	10,677	48,408
Total	**19,38,493**	**93,985**	**3,26,292**	**44,64,377**	**1,53,801**	**5,05,152**

@ : Net of redemptions. * : As at the end of March.
Source: Securities and Exchange Board of India.

oriented schemes increased by 38.8 per cent during the same period. While higher interest rates seemed to have made the debt schemes more attractive to the investors, resource mobilisation through growth/equity-oriented schemes during the year was supported by the robust performance of the domestic stock markets.

7.33 During April-October 2008, mutual funds witnessed net outflow of funds of the order of Rs.44,319 crore. Consequently, investments of mutual funds in the equity market and money market declined significantly during the current financial year so far. In the wake of the tight liquidity conditions since June 2008, mutual funds have faced redemption pressures. Despite the liquidity measures taken by the Reserve Bank during September-November 2008, most fund managers adopted a cautious approach and preferred to invest only in non-convertible debentures having daily put/call options in anticipation of impending third instalment of advance corporate tax by mid-December 2008. Typically, mutual fund schemes witness large outflows during advance tax payments.

Table VII.3: Funds Mobilised by Mutual Funds - Type of Schemes

(Amount in Rs. crore)

Scheme	2006-07				2007-08			
	No. of Schemes	Gross Mobilisation	Net Mobilisation@	Net Assets*	No. of Schemes	Gross Mobilisation	Net Mobilisation@	Net Assets*
1	2	3	4	5	6	7	8	9
A. Income/Debt Oriented Schemes	**450**	**18,39,669**	**64,067**	**1,93,584**	**593**	**43,17,263**	**1,03,867**	**3,12,997**
(i) Liquid/Money Market	55	16,26,790	4,985	72,006	58	34,32,737	14,976	89,402
(ii) Gilt	28	1,853	-964	2,257	30	3,180	434	2,833
(iii) Debt (other than assured return)	367	2,11,026	60,046	1,19,321	505	8,81,346	88,457	2,20,762
B. Growth/Equity Oriented Schemes	**267**	**94,352**	**28,206**	**1,23,598**	**313**	**1,26,287**	**46,933**	**1,72,742**
(i) ELSS	40	4,669	4,453	10,212	43	6,448	6,151	16,020
(ii) Others	227	89,683	23,753	1,13,386	270	1,19,839	40,782	1,56,722
C. Balanced Schemes	**38**	**4,473**	**1,711**	**9,110**	**37**	**11,488**	**5,768**	**16,283**
D. Exchange Traded Funds	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**13**	**9,339**	**-2,767**	**3,130**
E. Fund of Funds Scheme	**33**	**2,854**	**1,164**	**2,215**	**37**	**3,567**	**1,162**	**3,742**
Total (A+B+C+D)	**755**	**19,38,494**	**93,984**	**3,26,293**	**943**	**44,64,377**	**1,53,801**	**5,05,152**

@ : Net of redemptions. * : As at the end of March.
Source: Securities and Exchange Board of India.

Developments in the Financial Markets

7.34 The critical role of developed and well-integrated financial markets can hardly be overemphasised for sustaining high growth, for the effective conduct of monetary policy, for developing a diversified financial system, for financial integration and for ensuring financial stability. Financial markets are becoming increasingly integrated, which has brought with it considerable benefits by way of increased access to finance, more efficient allocation of capital, and greater diversification of risk. On the downside, however, the increasing complexity and integration of financial markets have brought with it new and constantly evolving challenges for authorities in mitigating financial stability risks as developments in one market are quickly transmitted to other markets as has been amply demonstrated during the recent financial market turmoil. Financial markets today deal with complex and sophisticated products which require clear regulatory frameworks, and appropriate institutions and human resource skills. Financial markets are often governed by herd behaviour and contagion that could lead to a race to the bottom. Excessive fluctuations and volatility in financial markets can mask the underlying value and give rise to confusing signals, thereby hindering efficient price discovery.

7.35 Prompted by the crisis in the US sub-prime mortgage market since August 2007, global financial markets remained turbulent during the most part of 2007-08 and 2008-09 so far. Equity markets in advanced economies declined during most part of the year 2007-08, while those in emerging market economies (EMEs) declined sharply from January 2008. Long-term Government bond yields in advanced economies softened, reflecting flight to safety by investors and easing of monetary policy in the US. In the currency markets, the US dollar depreciated against major currencies.

7.36 Notably, India could pursue its process of financial deregulation and opening of the economy, while substantially protecting itself from the turbulence in world financial markets. There has been a great deal of progress in developing the money market, Government securities market and the foreign exchange market. As greater market concentration has implications for stability, the endeavour of the reform process has been to enhance the depth and efficiency of the market by including more participants and more instruments so that risks are well diversified (Box VII.2). With a view to deepening the money market and imparting greater liquidity to the market for facilitating efficient price discovery, new instruments such as collateralised lending and borrowing obligation (CBLO) were introduced. Issuance norms and maturity profiles of other money market instruments such as commercial paper (CP) and certificates of deposit (CDs) were also modified over time to encourage wider participation. It is, however, important that while using new financial instruments, the market players have a proper understanding of the embedded risks in these complex products.

7.37 Domestic financial markets conditions in general remained orderly during 2007-08, barring a brief spell of volatility in the call money market and occasional bouts of volatility in the equity market during the second-half of August 2007, second-half of December 2007 and beginning of the second week of January 2008. Liquidity conditions in the financial markets were driven mainly by Government cash balances and capital flows in the economy. Brief spells of volatility were observed in the money market on account of changes in capital flows and cash balances of the Central Government with the Reserve Bank. After the withdrawal of the ceiling on reverse repo acceptances under the LAF in

Box VII.2: Financial Market Concentration: Implications for Market Stability

The issue of whether concentrated financial markets - in which a relatively small number of firms hold large market shares - are more likely to be disrupted than less concentrated ones is important to policymakers as well as other market participants concerned about potential threats to market stability. Markets can experience shock to supply and demand from several sources such as changes in regulation and technological innovations, but one particular type of supply shock, *viz.*, the failure or exit of one or more large suppliers could be a cause for market instability.

In a recent study by the Federal Reserve Bank of New York, it was found that there is no pervasive pattern in the past decade of high or increasing concentration in financial markets (Cetorelli *et al.*, 2007). Consistent with past academic studies, the authors find an ambiguous relationship between market concentration and market instability. They argue that the risk of instability should a large player exit the market, depends not just on market concentration, but also on the speed at which other firms can substitute for the exiting firm. An analysis of how the US financial market structure has changed over the last decade finds no pervasive pattern of high and increasing concentration. Most wholesale credit and capital markets in the United States are only moderately concentrated, and concentration trends are mixed - rising in some markets, falling in others. Cetorelli *et al.*, drawing on academic research as well as introducing new analysis, consider the link between market concentration and the risk or severity of instability.

A complementary line of inquiry into the link between concentration and the risk or severity of market instability focuses on substitution by firms; substitution can stabilise markets by dampening the upward pressure on prices attributable to a large exiting supplier. The departure of a major supplier would cause less market disruption, the more promptly other firms can substitute for it. Thus, prompt substitution by other firms is a critical factor supporting market resiliency. Substitution is a stabilising force because it can dampen the upward pressure on prices attributable to the failure of a large firm. The authors' findings can offer some reassurance to policymakers and others concerned about whether high or rising financial market concentration could suggest greater market instability.

Monitoring market concentration and turnover trends and introducing public policies that enhance firm substitution within a given market is highly recommended to enhance the stability of the markets. Such policies could include promoting standardisation of products, ensuring rapid clearing of payments, and monitoring competition to ensure that key players do not become entrenched, and hence irreplaceable, because of privileged access to trading platforms or technologies.

Reference:

Cetorelli, Nicola, Beverly Hirtle, Donald Morgan Stavros Peristiani and Joao Santos. 2007. "Trend in Financial Market Concentrations and their Implications for Market Stability." *FRBNY Economic Policy Review*. March.

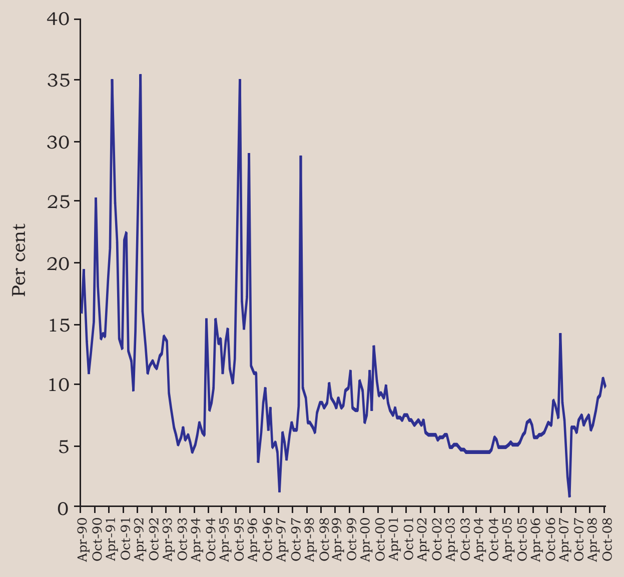
August 2007, interest rates in money markets moved broadly within the reverse repo and repo rates corridor for the most part of the year. Interest rates in the collateralised segments of the money market moved in tandem with, but remained below, the call money rate. The primary market segment of the capital market, which had witnessed increased activity till early January 2008, turned subdued thereafter due to volatility in the secondary market. Yields in the Government securities market softened during the large part of the year.

Money Market

7.38 Responding to the reform measures initiated as a part of the financial sector reforms initiated in the 1990s, the call money market has generally witnessed orderly conditions and provided the necessary platform for the Reserve Bank to conduct its monetary policy. After the adoption of the LAF in June 2000 and consequent improvement in liquidity management by the Reserve Bank, volatility in call rates has declined significantly, compared with the earlier periods (Chart VII.1). Thus, while statutory pre-emptions such as cash reserve ratio (CRR) and SLR, and reserve maintenance period were the main factors that influenced call rates in the pre-reform period, it is capital flows, Government's cash balance with the Reserve Bank along with the Reserve Bank's liquidity management operations that have been the main drivers of call rates in the post-reform period.

7.39 During 2007-08, money market rates generally remained within the informal corridor set by reverse repo and repo rates of Liquidity Adjustment Facility (LAF) (Chart VII.2). The average call rate during 2007-08 was at 6.07 per cent, 115 basis points lower

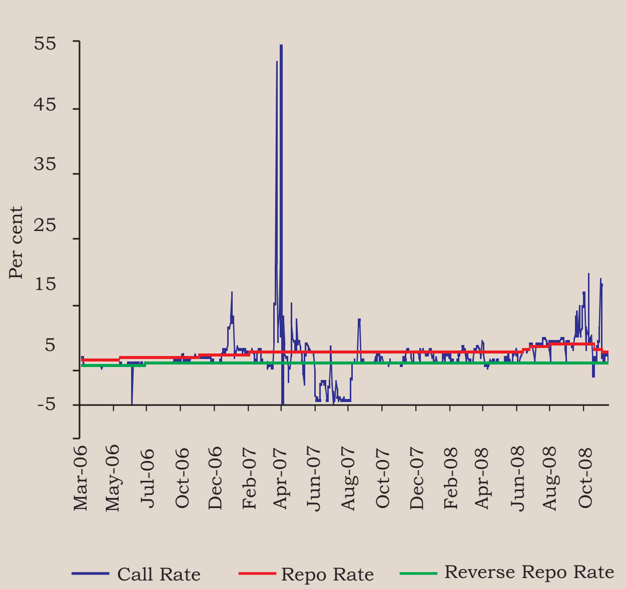
Chart VII.1 Behaviour of Call Rates (Monthly Average)



than that of the previous year. Interest rates in the collateralised segments of the money market moved in tandem with, but remained generally below the call money rate during the year.

7.40 The money market generally remained stable in 2007-08, barring brief spells of volatility during April-June 2007, and October 2007. In the call/notice money market, the weighted average call/notice rates declined in April 2007 from the elevated levels in the second-half of March 2007, as the liquidity conditions eased on account of reduction in the cash balances of the Central Government. Liquidity conditions tightened from the second-half of April 2007 and thereafter, partly on account of a two-stage hike in the CRR by 25 basis points each, announced on March 30, 2007. The CRR was raised to 6.25 per cent and 6.50 per cent effective from the fortnight beginning April 14, 2007 and April 28, 2007, respectively. Consequently, the call/notice money market rates edged higher and exceeded the repo rate during the second-half of April 2007 and some part of May 2007. From May 28, 2007 onwards, the liquidity conditions eased significantly, reflecting the reduction in cash balances of the Central Government and the Reserve Bank's foreign exchange operations. Against the background of excess liquidity and the cap of Rs.3,000 crore on the reverse repo window of LAF imposed with effect from March 5, 2007, the call rate remained below the reverse repo rate in June and July 2007. In fact, the call rate ruled below one per cent on a number of occasions in June and July 2007 and it reached as low as 0.13 per cent on August 2, 2007. The volatility in the call money market declined significantly after August 2007, with the removal of the cap of Rs.3,000 crore on the absorption under the reverse repo window of LAF. Subsequently, the call money rate generally remained within the corridor for the rest of 2007-08 (Chart VII.3).

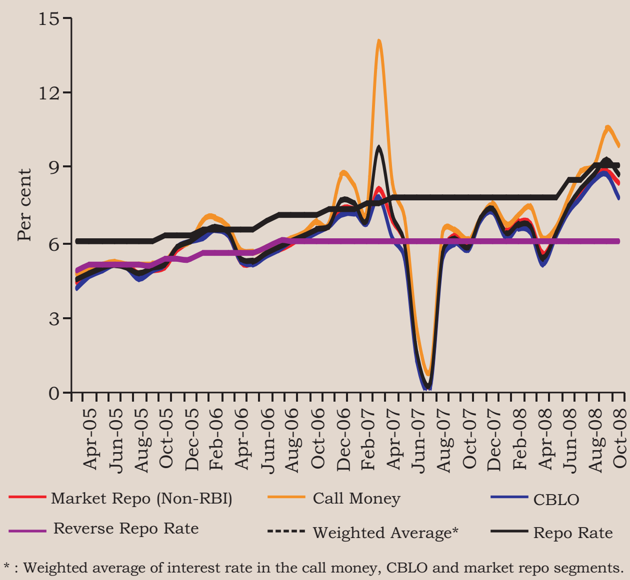
Chart VII.2: Call Money, Repo and Reverse Repo Rates



7.41 During April-August 2007, the average call rate remained outside the informal corridor, set by the repo and reverse repo rates of LAF. Except for the above period, the call money market remained more or less stable during 2007-08. In 2007-08, it remained below the reverse repo rate on 85 days, while it remained above the corridor on 70 days[10]. During 2008-09 (till November 15, 2008), the

[10] As a general practice, all rates for previous days were repeated for the bank holidays and Sundays.

Chart VII.3: Interest Rates in Money Market



call rate remained generally above the repo rate on most of the days. While it remained within the corridor on 91 days, it remained below the reverse repo rate on 17 days. The elevated levels of the call rates reflected the deficient liquidity conditions in the inter-bank markets. The call rate in 2007-08 generally remained below the corridor during June and July 2007, when the Rs.3,000 crore cap was operative on reverse repo window (Chart VII.4).

Excluding these two months, call money rates marginally declined below the reverse repo rate during few discrete spells in the rest of 2007-08 and during the current financial year so far. On the other hand, a seasonal pattern in money market rates was observed with respect to the movements above the upper corridor (Chart VII.5). These upward movements were generally during the end of the quarter coinciding with the temporary liquidity shortage due to advance tax outflows. The call rate marginally breached the upper corridor for most of the days in April-May 2007 and October 2008. During the current financial year so far, there have been spells, when rates in the money market remained above the repo rate. reflecting temporary lightness in liquidity conditions and global financial turmoil

7.42 Interest rates in the collateralised segments of the money market - the market repo (outside the LAF) and the CBLO - moved in tandem with, but remained below the call rate. The collateralised market is now the predominant segment of the money market, accounting for nearly 80 per cent of the total volume during 2007-08 (Chart VII.6). During

Chart VII.4: Spells with Call Rate Below Reverse Repo Rate

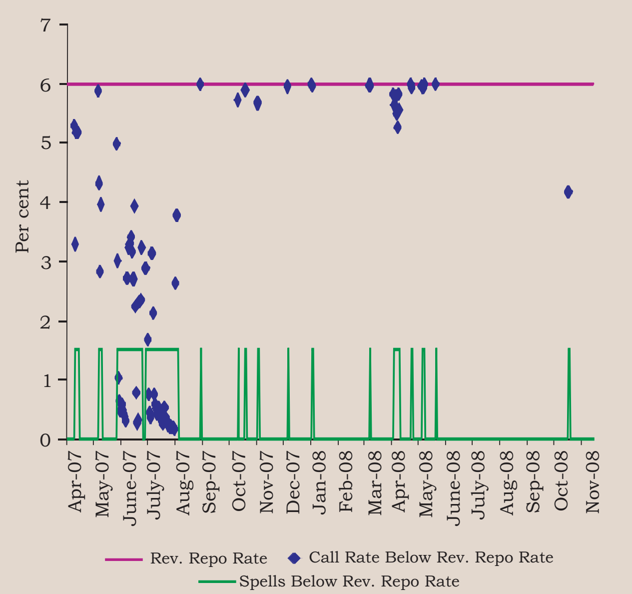


Chart VII.5: Spells with Call Rate Above Repo Rate

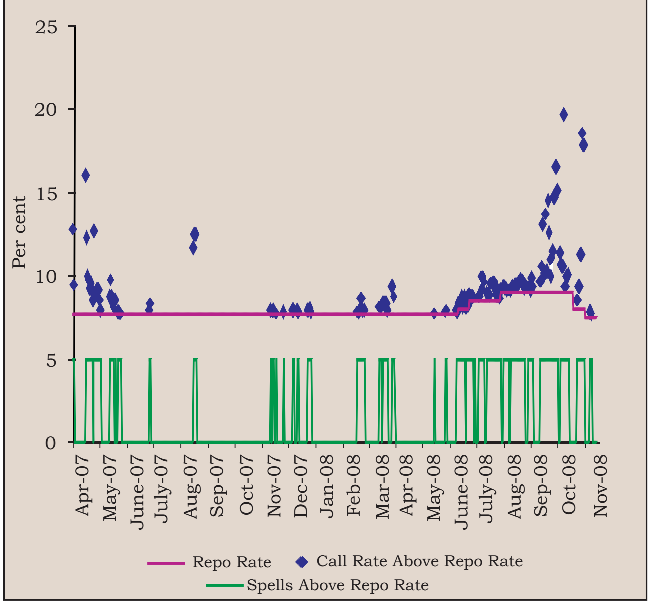
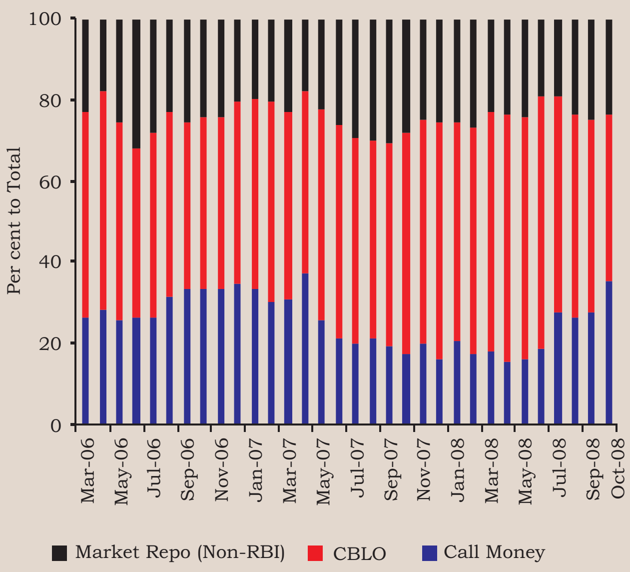


Chart VII.6: Money Market - Volume (One Leg)



2007-08, interest rates averaged 5.20 per cent, 5.50 per cent and 6.07 per cent, respectively, in the CBLO, market repo and call/notice money market segments (6.24 per cent, 6.34 per cent and 7.22 per cent, respectively, a year ago). The weighted average rate for all the three money market segments combined together was 5.48 per cent during 2007-08 as compared with 6.57 per cent a year ago. In both the CBLO and market repo segments, mutual funds remained the major lenders, while commercial banks and primary dealers were the major borrowers.

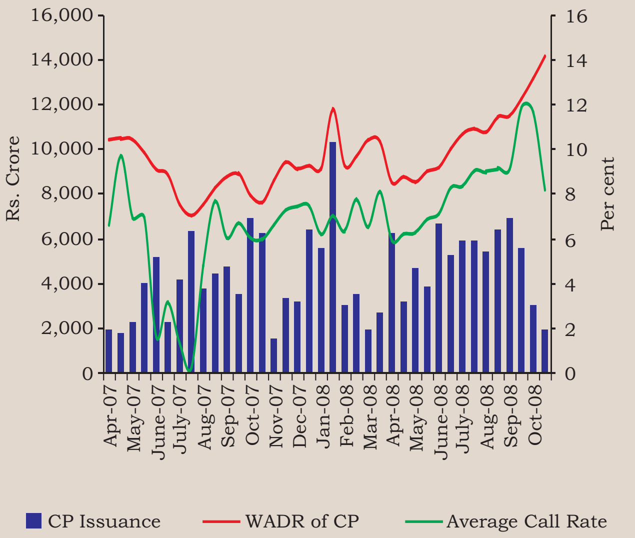
7.43 A screen-based negotiated quote-driven system for all dealings in the call/notice and term money markets (NDS-CALL) was launched on September 18, 2006. Though the dealing on the platform is optional, 86 banks and 8 primary dealers have taken membership of NDS-CALL so far. NDS-CALL now accounts for more than 75 per cent of total call/notice transactions.

7.44 The outstanding amount of commercial paper issued by companies increased from Rs.17,863 crore at end-March 2007 to Rs.32,592 crore by end-March 2008 and further to Rs.48,442 crore by end-October 2008. Even factoring in the seasonality, the increase in CP issuances reflects the secular rise in credit demands of a growing economy. The weighted average discount rate (WADR) generally kept pace with the other money market rates. However, since September 2008, the incremental issuance of CP seems to have slowed down with the hardening of the WADR as well as increase in tenor of the issuances (Chart VII.7).

7.45 While non-banking finance companies are the major CP issuers, mutual funds (MFs) are major investors in CP. The redemption pressure faced by MFs since September 2008 adversely affected liquidity conditions in the money market, which had a spill-over impact on the CP market.

7.46 The outstanding amount of certificates of deposit issued by SCBs increased from Rs.93,272 crore at end-March 2007 to Rs.1,47,792 crore at end-March 2008 and thereafter to Rs.1,58,562 crore at end-October 2008. The SCBs resorted to higher issuance of CDs to augment their resources till September 2008. However, the CDs issuances have slowed down since mid-September 2008 following the knock-on effect of the global

Chart VII.7: CP Outstanding, WADR and Average Call Rate



financial crises on the Indian financial sector (Chart VII.8). The maturity period of the most CDs roughly ranges between 181 and 365 days. Major portion of the CDs would mature in the second half of the financial year.

7.47 As mutual funds are the major investors in the CDs, the recent developments seem to have had a direct impact on the CD market. In view of this, the Reserve Bank has relaxed some restrictions on lending and buy-back of CDs for 15-day period in October 2008. Further, a term repo facility for an amount of Rs.60,000 crore has been instituted under the LAF to enable banks to ease the liquidity stress faced by MFs and non-banking financial companies with associated SLR exemption of 1.5 per cent of NDTL.

Foreign Exchange Market

7.48 Following the reform measures taken since 1992, the foreign exchange market has acquired depth and liquidity. The continuous improvement in market infrastructure has had its impact in terms of enhanced depth, liquidity and efficiency of the foreign exchange market. The bid-offer spreads have declined, reflecting the liquidity and efficiency of the market. There is a wide menu of products available in the OTC market, which serves a distinct economic purpose. Several initiatives were undertaken during 2007-08 to simplify foreign exchange transactions and also to provide greater flexibility to individuals and corporates in undertaking foreign exchange transactions. Over the years, capital flows have assumed increased importance in determining exchange rate dynamics.

7.49 The Indian rupee exhibited two-way movement and moved in a broad range of Rs.39.26-43.15 per US dollar during the financial year 2007-08 (Chart VII.9). Large capital inflows resulted in an appreciation of rupee during most part of the year. However, large FII outflows and heavy dollar demand by oil companies led the rupee to depreciate during the last quarter of 2007-08. Amongst major international currencies, between end-March 2007 and end-March 2008, while the rupee experienced an appreciation of 9.0 per cent against the US dollar and 7.6 per cent against the pound sterling, the rupee depreciated by 7.8 per cent against the Euro and 7.6 per cent against the Japanese Yen during the same period. Reflecting the

Chart VII.8: Movement of WADR of CDs and Average Call Money Rate

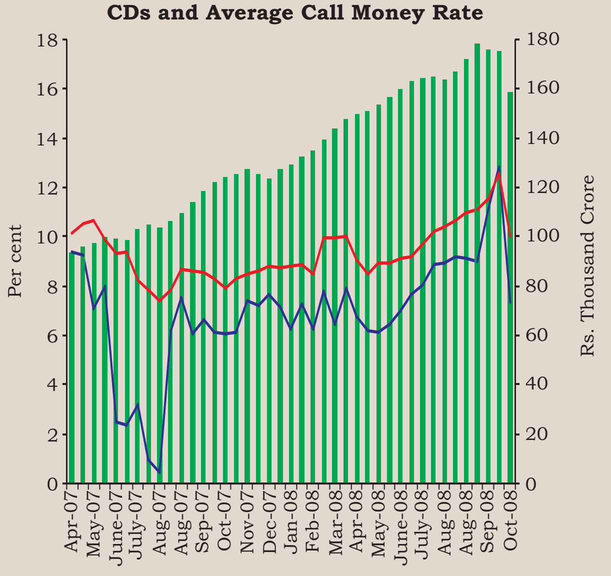


Chart VII.9: Exchange Rate - Rupee *vis-a-vis* US Dollar