

# Chapter III

## Organisational Structure, Operating Framework and Instruments of Monetary Policy

### 1. Introduction

III.1. A central bank's success depends on the quality of its decisions. Even with a clear target, suitable instruments and full insulation from outside pressures, a central bank cannot possibly foresee all contingencies. Eventually, its decision has to depend on judgment and, therefore, some discretion, which is best bounded by credible and transparent institutional accountability, is unavoidable. It is in this context that monetary policy decision-making has undergone a silent transformation<sup>1</sup>. The practice of Governor as the single decision-maker is being replaced by committees and no country has yet replaced a committee with a single decision-maker. The benefits attributed to a committee-based approach are: gathering more and better information; pooling different conclusions, potentially reducing errors; insurance against strong individual preferences; and peer reviews promoting openness of interaction and independence. On the other hand, several costs have also been identified: free riding (not contributing fully to decision-making); inertia (could be easily embedded in decisions tending to *status quo* even as a default option); and groupthink. Key to the implementation of the monetary policy decision, irrespective of whether it is taken collegially or by a single decision-maker, are: (a) an operating framework that enables the alignment of suitable instruments to final goals; (b) benchmarking the path set for policy instruments against rules developed through rigorous analysis of complex and fast changing macro dynamics, including structural macro models, dynamic stochastic general

equilibrium (DSGE) models and Taylor rule type formulations; (c) avoidance of perverse incentives, such as seeking to influence the gilt yield curve, inhibiting price discovery, impeding monetary transmission, and potentially creating a conflict with the monetary authority's primary objective; and (d) sensitivity to financial stability concerns.

### 2. Organisational Structure for Decision-making: The International Experience

III.2. The organisational structure of the decision-making process in monetary policy varies across countries. Most central banks have adopted a committee approach for monetary policy decisions. Among major non-inflation targeting central banks is the US, where the Board of Governors of the Fed is responsible for the discount rate and reserve requirements, while the Federal Open Market Committee (FOMC) is responsible for announcing the Fed Funds target rate. In Japan, the stance of monetary policy is decided by the Policy Board at Monetary Policy Meetings (MPMs). In China, the Monetary Policy Committee (MPC) is a consultative body, which has an advisory role in the context of comprehensive research on the macroeconomic situation and the macro targets set by the State Council, which is also entrusted with the monetary policy decision.

III.3. The monetary policy decision-making process in inflation targeting countries can be broadly summarised as follows<sup>2</sup>:

- Most inflation targeting central banks have an MPC which is involved with decision-making.

<sup>1</sup> Blinder, A. (2004): "The Quiet Revolution", *Central Banking Goes Modern*, Yale University Press.

<sup>2</sup> This section draws heavily from "State of the Art of Inflation Targeting – 2012" CCBS Handbook No.29, Bank of England available at <http://www.bankofengland.co.uk/education/Documents/ccbs/handbooks/pdf/ccbshb29.pdf> accessed on October 24, 2013. This handbook reviewed practices prevailing in 27 inflation targeting central banks.

- The final decision on monetary policy is taken by the board of central banks in many countries (thirteen) while in other (eleven) countries the decision is made by the MPC. There are also countries where the MPC makes recommendations to the board, which then takes the final decision.
- The size and composition of committees vary across countries. The number of members range from five to ten. Among inflation targeting countries, about half have no external members in their MPCs.
- The Government does not have representation in the MPC in most countries (except in Colombia, Guatemala and the Philippines).
- Appointment of the members of the MPC is decided by the board of central banks or the central bank Governor in some countries (Israel, Serbia, South Africa); in others, they are appointed by the Government (UK, Poland, Mexico, Indonesia).
- Decision-making in MPCs is mostly by voting while about eight countries arrive at monetary policy decisions through a consensus.
- In 12 countries, the MPC meets every month, and most countries have MPC meetings at least bi-monthly.

III.4. The major rationale for entrusting the task of monetary policy decision to a specialised committee appears to be that monetary policy formulation requires considerable knowledge and expertise on the subject domain. A committee also brings in

participation from different stakeholders as well as diverse opinion which could help in improving the representativeness in the overall decision-making process. Collective wisdom of a group makes the whole somewhat greater than the sum of its parts because it does not simply mimic the views of (a) the average voter, (b) the median voter, and (c) the most skillful member (Blinder, 2008)<sup>3</sup>. This view is supported by experimental evidence (Blinder and Morgan, 2005)<sup>4</sup> and a cross country assessment of performance of MPCs in about 40 countries (Maier, 2010)<sup>5</sup>.

### 2.1 Accountability

III.5. Central bank accountability is the mechanism through which a system of checks and balances is established for the central bank in a democratic set-up. Formally, central banks are accountable to the Government or the Parliament, from where they derive their statutory authority. In practice, they are typically made accountable to legislative committees, ministers of finance, or supervisory boards. The choice of accountability mechanisms generally depends on the nature of the central bank's responsibilities. The mechanisms used for easily observable and quantifiable objectives, such as price stability, are different from those for objectives that are hard to measure, such as financial stability, or not easy to observe, such as the stewardship of resources (BIS, 2009)<sup>6</sup>.

III.6. In some countries (*e.g.*, New Zealand), the central bank Governor is legally the sole decision-maker, which makes it especially clear whom to hold

<sup>3</sup> Blinder, A. (2008): "Making Monetary Policy by Committee". *CEPS Working paper* No. 167, June.

<sup>4</sup> Blinder A. and J. Morgan (2005): "Are Two Heads Better than One? An Experimental Analysis of Group versus Individual Decision-making", *Journal of Money, Credit and Banking*, 37(5).

<sup>5</sup> Maier, P. (2010): "How Central Banks Take Decisions: An Analysis of Monetary Policy Meetings" in P.L. Siklos, M. T. Bohl & M. E. Woher (eds), *Challenges in Central Banking: The Current Institutional Environment and Forces Affecting Monetary Policy*, Cambridge University Press, Cambridge.

<sup>6</sup> BIS (2009): "Issues in the Governance of Central Banks", *A Report by the Central Bank Governance Group*, May (Chap 7). Available on <http://www.bis.org/publ/othp04.htm>.

responsible. In most other central banks, however, decisions are made by a board, committee or council, which gives rise to the issue of collective *versus* individual responsibility. There are several formal mechanisms through which central banks are held accountable for their activities: (i) monitoring by the government or legislature, (ii) publication of regular central bank reports, and (iii) tacit endorsement (the government or Parliament in about one-fifth of countries has explicit power to provide formal directives to the central bank, to override decisions or otherwise change the course of policy) (BIS, 2009).

III.7. The vast majority of central banks have published targets (in particular, for monetary policy), but only a limited number – about 20 per cent and mostly in industrialised countries – are subject to formal procedures when targets are missed. Typically this involves additional reporting requirements to explain the reasons for missing the target as well as the measures and time frame needed to meet the target. Another potential remedial action is no reappointment or even dismissal. But, often, central bank officials can be dismissed only in cases of serious misconduct or incapacity and rarely because of poor performance. Most central banks, and nearly all in EMEs, are regularly monitored by their legislatures. In some countries, the relevant legislative bodies have addressed the problem of expertise by formally consulting external experts on monetary policy matters<sup>7</sup> (BIS, 2009).

### 3. Organisational Structure for Monetary Policy Decisions in the RBI

III.8. The responsibility, accountability and timing of decision-making relating to monetary policy remains with the Governor who is directly accountable to the Government of India. The RBI Act states that the Central Government shall appoint and remove the Governor and may give the RBI directions in the public interest<sup>8</sup>.

III.9. Thus, in India, monetary policy decisions are made by the Governor alone. Indeed, quarterly policy statements are issued in the Governor's name<sup>9</sup>. The process of monetary policy formulation in the RBI has, therefore, been traditionally internal. For policy formulation, the Governor is assisted by Deputy Governors, with one Deputy Governor specifically entrusted with the responsibility for monetary policy setting and conduct, and is guided by the inputs received from the Committee of the Central Board of Directors that meets every week to review monetary, economic and financial conditions.

III.10. Over time, the monetary policy formulation process has become more consultative and participative with an external orientation. Following the introduction of quarterly policy reviews (April/May, July, October and January) in 2005, the RBI set up a Technical Advisory Committee on Monetary Policy (TACMP) in July of the same year with external experts in the areas of monetary economics, central banking, financial markets and public finance. The Committee is chaired by the Governor, with the Deputy Governor

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<sup>7</sup> An example of such an external agency is the International Monetary Fund (IMF), which usually comments on monetary policy in its regular Article IV consultations. The IMF also publishes Reports on the Observance of Standards and Codes (ROSCs) that summarise the extent to which certain internationally recognised standards and codes are observed in areas such as monetary and financial policy transparency, banking supervision and payment systems.

<sup>8</sup> " the Reserve Bank of India is a statutory corporation constituted by the Act of 1934, which is wholly under the control of the Government of India...." (G.P. Wahal *versus* Reserve Bank of India 1983, Lab.I.C.738 (All) (D.B); Reserve Bank of India *versus* S. Jayarajan (1996) 2 Lab.L.J.735 (SC).

<sup>9</sup> Since 2010, the RBI instituted mid-quarter reviews (4 in number in June, September, December and March) in addition to quarterly policy reviews. The mid-quarter reviews are issued on the RBI's website as press releases.

in charge of monetary policy as the vice-chairman and the other Deputy Governors of the RBI as internal members. The Committee meets at least once in a quarter, reviews macroeconomic and monetary developments and advises the RBI on the appropriate stance of monetary policy. It also provides policy recommendations for mid-quarter reviews, which were introduced in 2010. The role of the TACMP is purely advisory in nature. Beginning with the meeting held in January 2011, the main points of discussions of the TACMP are placed in the public domain, with a lag of roughly four weeks after the meeting of the Committee. Members of TACMP have agreed not to speak in public on issues relating to monetary policy from ten days before the TACMP meeting up to one day after the policy announcement though members may express their views in public in other periods in their individual capacity. This shut period is a self-imposed discipline.

III.11. With effect from October 2005, the RBI introduced pre-policy consultation meetings with representatives of different segments of the banking sector, trade and industry bodies, financial market participants, credit rating agencies and other institutions. Since 2009, the RBI has also been holding consultations with senior economists and market analysts twice a year in the run up to the annual policy and the second quarter review.

III.12. To bring in transparency in the process of policy formation, the RBI places in public domain all data/inputs that go into the formulation of monetary policy – its internal macroeconomic assessment and results of surveys<sup>10</sup> in the form of a report entitled 'Macroeconomic and Monetary Developments'.

### 3.1 RBI's Accountability

III.13. The Reserve Bank of India Act does not prescribe any formal mechanism for accountability. Over the years, however, certain practices for accountability have evolved. The RBI sets the rationale of its policies and indicates possible expected outcomes. The Governor holds a regular media conference after every quarterly policy review which is an open house for questions, not just related to monetary policy, but the entire domain of activities of the RBI. The RBI also assists the Finance Minister in answering Parliament questions relating to its domain. Most importantly, the Governor appears before the Parliament's Standing Committee on Finance whenever summoned, which happens on an average three to four times a year (Subbarao, 2013)<sup>11</sup>.

III.14. The Financial Sector Legislative Reforms Commission (FSLRC) makes a strong case for monetary policy independence with accountability and recommends that independence needs to be accompanied by legal and administrative processes that clearly delineate the functioning of the regulator from the rest of the Government. Outlining the parameters of accountability, the FSLRC specifies that in the event of a failure (to be defined clearly), the head of the central bank would have to: (a) write a document explaining the reasons for these failures; (b) propose a programme of action; (c) demonstrate how this programme addresses the problems that have hindered the achievement of the target(s); and (d) specify a time horizon over which the MPC expects the target to be achieved. A further check is envisaged in the form of a reserve power granted to the Central Government to issue directions to the central bank on issues of monetary policy under certain extreme

<sup>10</sup> Industrial outlook; order book, inventory and capacity utilization; inflation expectations; credit conditions; consumer confidence; corporate performance; and professional forecasters' assessments.

<sup>11</sup> Subbarao, D (2013): "Five Years of Leading the Reserve Bank - Looking Ahead by Looking Back", Tenth Nani A. Palkhivala Memorial Lecture delivered in Mumbai on August 29. Available on <http://www.rbi.org.in>

circumstances. Given the drastic nature of this power, any direction under this power must be approved by both Houses of Parliament and can be in force only for a period of three months. Such direction may be issued in consultation with the head of the central bank.

### **3.2 Recommendations of Earlier Committees on MPC**

III.15. Several committees have recommended formation of a full-fledged monetary policy committee (MPC). The Standing Committee on International Standards and Codes, 2002 (Chairman: Dr. Y.V. Reddy) recommended legislative changes in the RBI Act so as to facilitate a mechanism for effective monetary policy. It recommended setting up of a Monetary Policy Committee on the lines of the Board of Financial Supervision.

III.16. The Committee on Fuller Capital Account Convertibility, 2006 (Chairman: Shri S.S. Tarapore) recommended that there should be a formal Monetary Policy Committee. It also recommended that at some appropriate stage, a summary of the minutes of the Monetary Policy Committee should be put in the public domain with a suitable lag.

III.17. The Committee on Financial Sector Reforms, 2009 (Chairman: Dr. Raghuram G. Rajan) recommended that a Monetary Policy Committee should take a more active role in guiding monetary policy actions. It should meet more regularly; its recommendations and policy judgments should be made public with minimal delays.

III.18. The Committee on Financial Sector Assessment, 2009 (Chairman: Dr. Rakesh Mohan) counseled on the need for strengthening the role of the TACMP and recommended that practices/procedures towards this goal be considered as it gains more experience.

III.19. The FSLRC, 2013 (Chairman: Shri B. N. Srikrishna) has recommended that :

- An executive MPC should be constituted that would meet on a fixed schedule and vote to determine the course of monetary policy.
- Once the MPC has determined the policy action, the central bank would establish an operating procedure through which the operating target would be achieved.
- There should be clear accountability mechanisms through which the central bank would be held accountable for delivering on the objectives that have been established for it.

III.20. While the FSLRC elaborated specific aspects of the decision-making process and accountability mechanisms, it was of the view that other critical elements – measurement and research, operating procedure, and monetary policy transmission – would take place through the management process of the central bank, with oversight of the board.

### **3.3 Rationale for the Committee's Recommendation**

III.21. Heightened public interest and scrutiny of monetary policy decisions and outcomes has propelled a world-wide movement towards a committee based approach to decision-making with a view to bringing in greater transparency and accountability. In India, the institution of a sole monetary policy decision-maker embodied in the Governor has served well in establishing credibility; since 2005, however, there has also been movement towards greater consultation with all stakeholders leading up to the setting up of the TACMP. With the publication of the minutes of the TACMP meetings since February 2011, there has been keen public interest in the views expressed in these meetings – particularly when the actual monetary policy decision has not reflected the majority view – attesting to greater appreciation of diversity of view points, independence of opinion and the flavour of specialized experience that TACMP members have brought to these deliberations. In order to make

monetary policy processes more transparent and predictable, the Committee is of the view that this consultative process of monetary policy making should be carried forward to its logical conclusion and formalized into a decision-making process in preference over the purely advisory role of the TACMP. This should bring in a greater sense of involvement and ownership, as well as accountability. Several committees in India have also recommended a formalized committee approach to monetary policy decision-making.

### **Recommendations**

III.22. *Drawing on international experience, the evolving organizational structure in the context of the specifics of the Indian situation and the views of earlier committees, the Committee is of the view that monetary policy decision-making should be vested in a monetary policy committee (MPC).*

III.23. *The Governor of the RBI will be the Chairman of the MPC, the Deputy Governor in charge of monetary policy will be the Vice Chairman, and the Executive Director in charge of monetary policy will be a member. Two other members will be external, to be decided by the Chairman and Vice Chairman on the basis of demonstrated expertise and experience in monetary economics, macroeconomics, central banking, financial markets, public finance and related areas.*

III.24. *External members will be full time with access to information/analysis generated within the RBI and cannot hold any office of profit, or undertake any activity that is seen as amounting to conflict of interest with the working of the MPC. The term of office of the MPC will ordinarily be three years, without prospect of renewal.*

III.25. *Each member of the MPC will have one vote with the outcome determined by majority voting, which has to be exercised without abstaining. Minutes of the proceedings of the MPC will be released with*

*a lag of two weeks from the date of the meeting.*

III.26. *In view of the frequency of data availability and the process of revisions in provisional data, the MPC will ordinarily meet once every two months, although it should retain the discretion to meet and recommend policy decisions outside the policy review cycle.*

III.27. *The RBI will also place a bi-annual inflation report in the public domain, drawing on the experience gained with the publication of the document on Macroeconomic and Monetary Developments. The Inflation Report will essentially review the analysis presented to the MPC to inform its deliberations.*

III.28. *The Chairman, or in his absence the Vice Chairman, shall exercise a casting vote in situations arising on account of unforeseen exigencies necessitating the absence of a member for the MPC meeting in which voting is equally divided.*

III.29. *The MPC will be accountable for failure to establish and achieve the nominal anchor. Failure is defined as the inability to achieve the inflation target of 4 per cent (+/- 2 per cent) for three successive quarters. Such failure will require the MPC to issue a public statement, signed by each member, stating the reason(s) for failure, remedial actions proposed and the likely period of time over which inflation will return to the centre of the inflation target zone.*

III.30. *With the establishment of the MPC, there would be a need to upgrade and expand analytical inputs into the decision-making process through pre-policy briefs for MPC members, structured presentations on key macroeconomic variables and forecasts, simulations of suites of macroeconomic models as described in Chapter II, forward looking surveys and a dedicated secretariat. This will require restructuring and scaling-up of the monetary policy department (MPD) in terms of skills, technology and management information systems, and its reorganization.*

#### **4. International Experience – Operating Targets, Instruments and Liquidity Management**

##### ***4.1 Operating Framework of Monetary policy***

III.31. The operating framework is all about implementation of monetary policy. It primarily involves three major aspects – choosing the operating target; choosing the intermediate target and choosing the policy instruments. The operating target pertains to the variable that monetary policy can directly control with its actions. The tool(s) with which the central bank seeks to impact the operating target is (are) the monetary policy instrument(s). The intermediate target is a variable which the central bank can hope to influence to a reasonable degree through the operating target and which displays a predictable and stable relationship with the goal variable(s). With growing instability in the relationship between the intermediate targets and the ultimate policy variables, intermediate targets have tended to be downgraded in monetary policy regimes of most central banks, although they are monitored as indicators/guides for their information content. The key challenge for the liquidity desk in the central bank is to use a combination of standing facilities, open market operations (OMOs) and reserve requirements to achieve the operating target on a day to day basis, and thereby ensure the first leg of monetary policy transmission. Assessment of liquidity to arrive at the OMO volume (*i.e.*, repo and outright taken together) that can ensure achievement of the operating target is therefore critical, but remains a challenge for every central bank.

III.32. The current norm across central banks of AEs and EMEs is to have a short-term interest rate as the operating target, while using liquidity management instruments to modulate the liquidity conditions suitably so as to control the operating target (Appendix Table III.1). In the US, the operating target of monetary policy is the Federal Funds rate – the rate at which

banks trade balances at the Federal Reserve. Similar to the US, Australia sets a target for the cash rate – the rate at which banks borrow from and lend to each other on an overnight, unsecured basis. Australia, however, regards the cash rate as its main instrument of monetary policy. The cash rate is determined by the demand and supply of exchange settlement balances that commercial banks hold at the Reserve Bank of Australia. Through its open market operations, the Reserve Bank of Australia alters the volume of these balances so as to keep the cash rate as close as possible to its target. Similar systems prevail in Canada, New Zealand, Norway and Indonesia. New Zealand adopted the official cash rate as an instrument of monetary policy in 1999; prior to that, the instruments used to control inflation included influencing the supply of money and signaling desired monetary conditions to the financial markets via a “Monetary Conditions Index”. These mechanisms were, however, indirect and hazy for the markets, and were eventually abandoned. In order to determine how much liquidity should be absorbed or made available to maintain supply and demand equilibrium in bank balances, Bank Indonesia sets targets for monetary operations each day. Since October 2008, it makes announcements of banking liquidity conditions twice daily, covering both total liquidity projection and excess reserves projection. In the UK, the main instrument of monetary policy is the Bank Rate (the interest rate at which money is lent to financial institutions). The main operational target for the Riksbank is the overnight rate which it influences by instruments such as standing facilities and fine-tuning operations. The repo rate is the Riksbank’s key policy signaling rate and a forecast path for the repo rate is given.

III.33. Among countries that have an operating target based on a market rate of interest, the Swiss National Bank (SNB) sets a target range for the three-month Swiss Franc Libor. There are two main monetary

policy instruments – open market operations (the SNB takes the initiative in the transactions) and standing facilities (SNB merely specifies the conditions at which counterparties can obtain liquidity).

III.34. Even though the short-term interest rate remains the main operating target for most central banks, the Bank of Japan switched its operating target from the uncollateralized overnight call rate to the monetary base in April 2013. It conducts money market operations with the explicit objective of expanding the monetary base at the rate of 60-70 trillion yen annually. China uses the growth rates of monetary aggregates as intermediate targets and typically employs several instruments in the implementation of its monetary policy—exchange rate, required reserve ratio, interest rates, and open market operations<sup>12</sup>.

III.35. An analysis of 170 economies showed that, despite the post-global financial crisis scrutiny of monetary policy regimes, there have not been too many instances of regime overhauls, and explicit nominal anchors either in the form of fixed exchange rates or inflation targets have been persevered with. The nature of operations, though, has changed from primary dependence on conventional measures to extensive use of non-conventional measures, but non-conventional measures only justify the need for flexibility in operations, rather than any change in the operating framework meant for normal times<sup>13</sup>.

#### **4.2 Liquidity Management**

III.36. Liquidity management is key to the operating framework as it (i) ensures controllability of the reserve target; (ii) ensures the first leg of monetary policy transmission by anchoring the short-term money market rates to the policy rate target; and (iii) prevents disruptions in payment and settlement, especially for liquidity deficit systems. In view of the

market frictions that could arise from institution-specific and systemic funding liquidity problems and their interdependence, all central banks attempt to institutionalise a sound liquidity management framework. The specific institutional setup, however, varies to a great deal across countries – in terms of maturity and frequency of operations, counterparty arrangements, and eligible collateral (Appendix Table III.2). Liquidity management frameworks typically involve maximum accommodation with ample discretionary provisions, particularly when short-term interest rates serve as the operating target.

III.37. Standing facilities (SFs) are transparent, available to banks and other counter parties without discretionary hurdles, and are generally considered as the safety valve of a liquidity management system. Virtually all central banks have a standing credit facility which extends funds to the deficit counterparty at a penal rate (*e.g.*, marginal lending facility of the ECB, primary and secondary credit facilities of the Fed). Eligible collaterals and tenor of borrowings, however, vary across countries. The standing deposit facility, though less in use, helps to define a floor rate in the inter-bank market, especially in liquidity surplus conditions. The main advantage of a SF is that it gives the central bank a window to intervene in both directions, when needed, to achieve the operating interest rate target, with volatility in inter-bank rates restricted to the corridor. Reducing the volatility in the inter-bank money market rate while achieving the interest rate target is both an objective and also a challenge for efficient liquidity management. There is evidence of asymmetric credit and deposit SFs in some countries.

III.38. In addition to SFs, discretionary operations of a central bank could be classified under two broad heads, *viz.*, (a) the main refinance operations and

<sup>12</sup> Morgan, Peter J. (2013): "Monetary Policy Frameworks in Asia: Experience, Lessons, and Issues", *ADBI Working Paper Series*, No. 435, September.

<sup>13</sup> Rose, Andrew (2013): "Surprising Similarities: Recent Monetary Regimes of Small Economies", *CEPR Discussion Paper Series No. 9684*, October.



(b) other discretionary operations. Under the main refinance operations, the most common instruments are OMOs, which are conducted on a pre-announced date by a central bank with voluntary participation from banks and primary dealers (PDs). Ideally, OMOs are used for both lending and borrowing, and include both outright purchase and repurchase agreements, depending upon the nature of liquidity requirements – structural or frictional. Some countries use both short term and long term repos (*e.g.*, UK) and others use central bank bills (Switzerland) and stabilisation bonds (Korea) to manage liquidity. Other discretionary operations to manage liquidity are mainly in response to unexpected short-term developments requiring non-standard, non-regular operations. Such operations include forex-swaps (Australia, Singapore), term deposits (Australia), compulsory deposits (Mexico), additional loans and deposits (Sweden) and funding for lending (UK).

III.39. Among the terms and conditions, eligibility of collateral is one of the most important aspects of liquidity management. All major central banks include public sector securities of their own country as eligible collateral. Since mid-2007, the eligibility frame has been widened in several countries to include financial entity debt (Japan, Mexico, Sweden and UK), covered bonds (Australia and UK), other asset backed securities (Australia, Canada, Mexico and UK), corporate debt and loans and other credit claims (Canada and UK) and cross-border collateral (Australia, Japan, Mexico and Singapore). With increased acceptance of diversified securities as collateral, countries have also adopted different policies relating to pricing, initial margins and haircuts.

III.40. As regards tenor of the liquidity facility, most central banks provide an overnight window, but country experiences show many instances of access to liquidity beyond overnight (for instance, the repo operation is up to one year in Australia and Japan, 65 days in the USA, one week in Korea, Switzerland and

Sweden, and 25 days in Mexico). The frequency of such operations also varies considerably across countries, with short-term repos on a daily/weekly basis, but also with longer-term operations once in a month or as per the discretion of the central bank. Other discretionary operations of both standardized and non-standardized nature vary from intra-day provision of liquidity several times a day (UK, Japan, Euro area) to long-term sterilisation operations and sporadic use of compulsory deposits (as in Mexico).

III.41. In view of the legacy influence of monetary targeting, there is often the challenge of distinguishing between liquidity management and monetary management. What is important to clarify in this context is that the same set of instruments could be used for liquidity management under an interest rate targeting rule and for monetary management under a monetary or reserve targeting rule. Thus, every instrument of liquidity management is a monetary policy instrument as well, but in an interest rate based operating framework, it is through liquidity management that the operating target is attained. Other than explicit changes in the policy interest rate or interest rate target – which alone should convey the stance of monetary policy – all other instruments may have to be seen as primarily meant for liquidity management, but consistent with the stance of monetary policy. In India, however, at least in the past few years, changes in policy rates and reserve requirements have at times conveyed divergent signals, thereby becoming a source of market confusion, which needs to be avoided by ensuring consistency between interest rate actions and liquidity management.

#### **4.3 Non-monetary Instruments**

III.42. While the use of monetary instruments in striving to achieve monetary policy objectives is quite pervasive, central banks have been employing non-monetary instruments as part of their overall policy toolkit and these instruments subserve monetary

policy considerations eventually. These instruments are tailored to deal with various exigencies: surges in capital flows; credit allocation; pro-cyclicality and interconnectedness; and the zero lower bound on the nominal interest rate, to note a few.

III.43. One set of instruments is primarily regulatory in nature: selective credit control measures ranging from improving credit culture (establishing credit bureaus; credit registry; higher risk weights for sensitive sectors), supervisory measures (on-site and off-site inspection of banks) and moral suasion. More recently, in order to halt the downward spiral of lending and borrowing that has plagued economies since the recession, central banks have activated schemes to kick-start the real economy, best exemplified by the Funding for Lending Scheme (FLS) initiated in the UK in July 2012 to allow commercial banks to borrow funds at a cheap rate from the central bank and lend to specified households and firms.

III.44. A second set of measures, primarily financial in nature, work their way through the foreign exchange market: liberalising/restricting capital flows; intervention in the foreign exchange market and sterilisation operations; reserve requirements on foreign currency instruments and variants of the Tobin tax.

III.45. A third set of measures is macroprudential in nature, designed to contain systemic risks. More specifically, such measures seek to address two specific dimensions of systemic risk – the time

**Table III.1: Use of Macro-Prudential Instruments by Country-Groupings**

Instrument	Advanced	Emerging	Total Number of Countries
Loan-to-value	9	15	24
Debt-to-income	2	5	7
Cap on credit growth	1	5	6
Limit on foreign lending	1	7	8
Reserve requirement	0	5	5
Dynamic provisioning	1	8	9
Countercyclical capital requirement	0	2	2
Restriction on profit distribution	0	6	6
Others	1	12	13

**Source:** Claessens, Stijn *et al.* (2013): "Macro-Prudential Policies to Mitigate Financial System Vulnerability", *Journal of International Money and Finance*, 39.

dimension (excessive leverage in upturns and excessive risk aversion in downturns) and the cross-sectional dimension or risk concentration (size, substitutability, interconnectedness) as collapse of large or systemically important financial institutions can destabilise the rest of the financial system<sup>14</sup> (Table III.1).

## 5. The Current Operating Framework of Monetary Policy in India

III.46. The current operating framework of monetary policy was implemented in May 2011 on the recommendations of the Working Group on Operating Procedure of Monetary Policy (RBI, 2011)<sup>15</sup>. The framework has the following distinguishing features: (a) the repo rate is the single policy rate; (b) the operating target is the weighted average overnight

<sup>14</sup> While measures addressing the time dimension are most common (capital ratios or credit growth, loan to value and debt to income ratios, liquidity requirements), several countries have recently undertaken measures aimed at the cross-section dimension, most notably in Switzerland (capital surcharge for systemically important entities), Korea (levy on non-core liabilities of banks, with the levy rate depending on maturity) and New Zealand (core funding ratio, wherein at least 75 per cent of banks' total lending will have to be funded with stickier liabilities such as retail deposits and wholesale borrowing maturing in more than a year). Indonesia, for example, raised reserve requirements on foreign currency accounts in March and June 2011; Taiwan effected similar such measures in January 2011. Chile in 1991 imposed a non-interest bearing 30 per cent reserve requirements on foreign currency liabilities. In 2008, Iceland became the first industrial country in decades to impose capital controls, to limit a flight of capital from its busted banks. Between 2009 and 2011 Brazil, South Korea, Thailand, Indonesia, among others, introduced controls to discourage inflows of hot money that they feared would drive their currencies to uncompetitive levels.

<sup>15</sup> RBI (2011): "Working Group on Operating Procedure of Monetary Policy", Chairman: Deepak Mohanty, available on <http://www.rbi.org.in>

call rate, which is aligned to the repo rate through: (i) a corridor around the repo rate of 100 basis points above the repo rate for the Marginal Standing Facility (MSF) and 100 basis points below the repo rate for the reverse repo rate, and (ii) full accommodation liquidity management *albeit* with an indicative comfort zone of +/- one per cent of net demand and time liabilities (NDTL) of the banking system; and (c) transmission of changes in the repo rate through the weighted average call rate to the ultimate goals of monetary policy without any specific intermediate target.

III.47. The transition to the current framework in which the interest rate is the operating target, from the earlier regime based on reserve targeting – *i.e.*, base money, borrowed reserves, non-borrowed reserves – was generally driven by two guiding considerations. First, financial sector reforms largely freed the interest rate from administrative prescriptions and setting (Appendix Table III.3), thereby enhancing its effectiveness as a transmission channel of monetary policy. Second, the erosion in stability and predictability in the relationship between money aggregates, output and prices with the proliferation of financial innovations, advances in technology and progressive global integration.

### 5.1 Liquidity Management Framework and Operations in India

III.48. The liquidity management framework in India stands on two broad mutually reinforcing pillars of forward looking assessment. Pillar-I is an assessment of the likely evolution of system-level liquidity demand based on near-term (four to six weeks) projections of autonomous drivers of liquidity. This forms the basis for taking decisions on use of discretionary liquidity absorbing/injecting measures to ensure that the liquidity conditions remain consistent with the goal of aligning money market rates to the policy repo rate. Pillar-II is an assessment of system-level liquidity over a relatively longer time

horizon, focusing on the likely growth in broad money, bank credit and deposits, the corresponding order of base money expansion and this assessment is then juxtaposed with a breakdown into autonomous and discretionary drivers of liquidity derived under Pillar I. Thus, Pillar II becomes the broader information set within which decisions relating to discretionary liquidity management measures are taken on the basis of Pillar I assessment.

#### **Pillar-I**

III.49. The core of Pillar I is near-term forecasts of autonomous drivers of liquidity, particularly demand for currency (which reflects behavior of households), demand for excess reserves (which reflects behavior of the banking system), and the central government's balances with the RBI (which depends on cash flows of the Government). Large fluctuations in the central government's balances with the RBI lead to corresponding automatic expansion/contraction in the RBI's balance sheet, which has a magnifying impact on the overall monetary conditions. For the purpose of liquidity management, forex market intervention is also an autonomous driver of liquidity, but since there cannot be any near term forecasts for these interventions, they are considered on information as available – *i.e.*, backward looking, impacting liquidity evolution on t+2 settlement basis (Table III.2). The extent of volatility seen in the major frictional drivers of liquidity has been large (Table III.3), which poses the challenge of generating

**Table III.2: Current Liquidity Management Framework**

Autonomous Drivers of Liquidity	Currency demand Bank reserves (required plus excess) Government's deposits with RBI Net forex market intervention
Liquidity Management	Net LAF (repo plus MSF plus reverse repo), Term Repos, OMOs, CRR, CMBs, MSS, Swaps, and Standing Refinance Windows

**Table III.3: Variations in Frictional Drivers of Liquidity since April 2012**

(₹ crore)

Major Autonomous Determinants of Liquidity Conditions	Weekly Changes				Daily Changes			
	Positive		Negative		Positive		Negative	
	High	Low	High	Low	High	Low	High	Low
1 Govt. cash balances with the RBI	71,692	5	62,835	621	48,504	38	49,072	2
2 Currency Demand	25,160	80	15,282	90	N.A.			
3 SCB's balances with the RBI (changes in excess CRR)	55,916	57	90,182	571	48,090*	13	59,131	20

\*: Excluding the large change of ₹1,38,800 on July 16, 2013.

credible and precise short-term forecasts of liquidity demand in the system. Nevertheless, using a combination of forward looking information and a backward looking assessment of the time series evolution of the frictional determinants of liquidity, projections are generated on a regular basis to inform the RBI's decisions on discretionary liquidity management.

III.50. The RBI's discretionary liquidity management operations (primarily in the form of OMOs and changes in CRR, and also in terms of fixing limits for term repos and overnight repo amounts)<sup>16</sup> is guided by the extent of LAF deficit that is 'reasonable' at any point of time, and the assessment of drivers of LAF deficit/surplus, *i.e.*, whether frictional or structural.

#### **Pillar-II**

III.51. Broad money growth that is consistent with inflation and growth projections at the beginning of the year and reviewed from time to time in a state-contingent manner provides leads about the growth in base money that will be required in the system during the course of the year. After accounting for autonomous drivers of liquidity and borrowed reserves (*i.e.*, access to LAF by banks), assessment of

the amount of discretionary liquidity management operations becomes possible, given the desirable evolution of the base money path as also the extent of LAF deficit/surplus relative to a norm (communicated in the form of +/- one per cent of NDTL). Rigid adherence to a base money rule is avoided due to uncertainties surrounding the relationship between monetary aggregates and the ultimate goal variables. Empirical estimates point to some improvement in the sensitivity of money demand to changes in the interest rate (Appendix Table III.4), thus providing the rationale for anchoring the operating framework with an interest rate rule. Currently, trajectories of monetary aggregates are only referred to as 'indicative'.

#### **5.2 Refinance Windows Undermine the Operating Framework**

III.52. For an operating framework that modulates liquidity consistent with the policy rate, standing sector-specific refinance facilities interfere with monetary policy transmission because of the assurance such facilities provide on additional access to liquidity at rates not determined by market forces. Accordingly, sector-specific refinance facilities have been phased out in India, though they tend to be

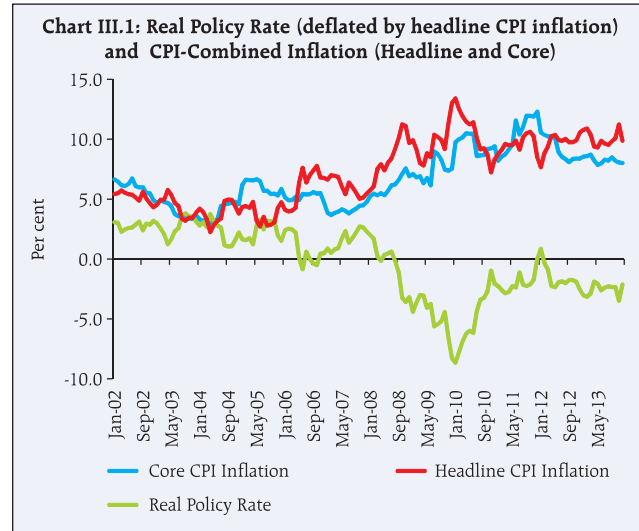
<sup>16</sup> To address exchange market volatility, since mid-July 2013 the RBI has restricted access to borrowed reserves, with caps on overnight repos and term repos. Even after normalization of the exceptional measures, limits on term repos and overnight repos have become an integral part of the liquidity management apparatus.

reopened or re-introduced in new forms on pressures by sector-specific lobbies for special monetary policy support (Appendix Table III.5). Sector-specific refinance facilities ultimately conflict with the goal of price stability. For a monetary policy framework that assigns primacy to lowering inflation through monetary policy actions, it is necessary that all sector-specific liquidity facilities be discontinued, accompanied by unambiguous communication that requests for sector specific liquidity support from any sector cannot be accommodated by the RBI.

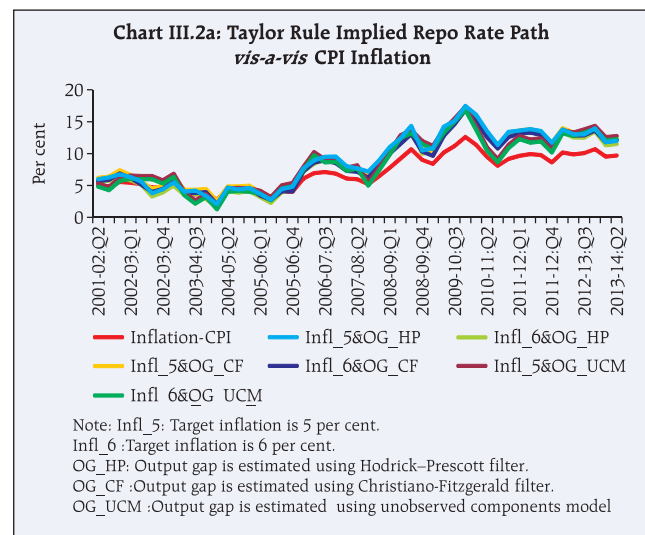
### 5.3 Recent Experience with Monetary/Liquidity Management Operating Framework and Rationale for Change

III.53. The experience since the institution of the extant operating framework, especially in terms of final macro outcomes has been disappointing – persistence of inflation well above the threshold of 5 per cent (WPI) articulated by the RBI; and *de facto* monetization of the fiscal deficit to the extent of 28 per cent of the overall borrowing programme of the Government on average *via* injections of primary liquidity through OMOs. Real policy rates have been persistently negative in high inflation episodes, as the operating framework does not follow a rule that can limit the scope for inflation tolerance (Chart III.1)<sup>17</sup>.

III.54. Following a simple rule (illustratively the thumb rule proposed by Taylor, 1993)<sup>18</sup> would have resulted in the repo rate path being much higher in the last few years than it has been, and thereby yielding positive real policy rates (Chart III.2a). On the other hand, if the output gap and inflation gap coefficients are estimated from data relating to the

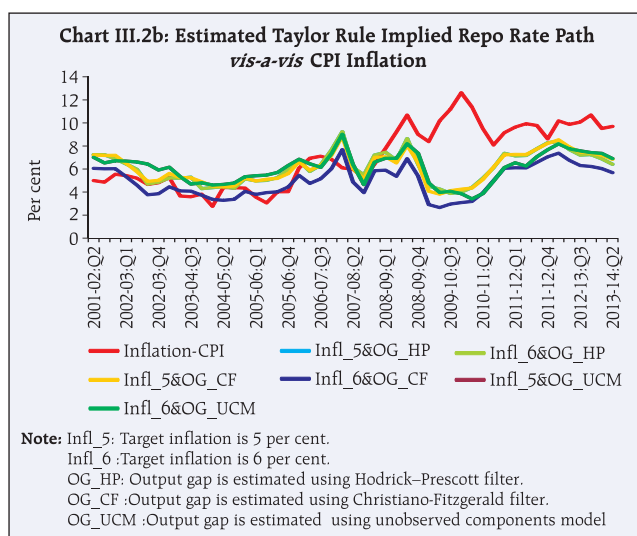


current and past monetary policy regimes for India and used in a Taylor-type formulation, the implied repo rate paths would lie lower than CPI inflation, yielding negative real policy rates (Chart III.2b). This empirical finding is validated for a range of estimates (*i.e.*, for output gaps estimated using the HP filter, Christiano-Fitzgerald filter and unobserved component



<sup>17</sup> Back-casted CPI-Combined data used in this report are given in Appendix Table III.6.

<sup>18</sup> As per the rule of thumb  $[i = \pi + r^* + 0.5(\pi - \pi^*) + 0.5(y - y^*)]$ , or  $[i = \pi^* + r^* + 1.5(\pi - \pi^*) + 0.5(y - y^*)]$ , where  $i$  = nominal interest rate,  $\pi$  = rate of inflation,  $\pi^*$  = inflation target,  $r^*$  = neutral real rate, and  $(y - y^*)$  = output gap. Applying the same coefficients for the inflation gap and output gap from the Taylor equation to estimated inflation gap and output gap for India yields an interest rate path that lies above the actual repo rate path, particularly during the high inflation phase of last few years. The rule implicitly highlights the justification for a positive real interest rate when inflation exceeds the target, and the need for positive real interest rates to manage inflationary pressures. (Taylor, J.(1993): "Discretion versus Policy Rules in Practice", *Carnegie Rochester Conference Series on Public Policy*, 39, pp. 195-214).



model, as also for CPI inflation thresholds of five per cent and six per cent). Estimated coefficients from extant interest rate rules in India suggest that: (i) inadequate weight was placed on inflation management in the past, and (ii) the WPI was the metric used to measure inflation, resulting in policy rates that were often negative in real terms *vis-à-vis* the CPI<sup>19</sup>. It may be necessary, therefore, to start with a simple policy rule in terms of a real policy rate as a context specific benchmark for the MPC<sup>20</sup>, and then gradually move to a Taylor type rule after securing price stability and anchoring inflation expectations. Under a flexible inflation targeting framework, the interest rate rule should assign a significantly greater weight to inflation management *vis-à-vis* other objectives. The outcome of such a framework is expected to result, on average, in positive real rates of return when inflation is above target.

III.55. Turning to the conduct of liquidity management operations and transmission of policy impulses, there has also been blocked transmission of policy rate cuts to support growth due to the central premise of keeping the system in a deficit mode and the call rate aligned to the repo rate, thereby suggesting the following limitations:

1. Liquidity management through the LAF (*i.e.*, up to excess SLR holdings plus additional access to liquidity from the MSF window by dipping 2 per cent below the required SLR) has made base money expansion endogenous. The policy stance, as reflected in changes in the repo rate, and the conduct of liquidity management are often mutually inconsistent and conflicting. Often, increases in policy rate have been followed up with discretionary measures to ease liquidity conditions.
2. The framework is one-sided by design, suitable only to transmission of a tightening stance through the persisting liquidity deficit mode in which the system is kept; consequently, the easing stance of policy between October 2011 and May 2013 did not transmit to arresting the growth slowdown.
3. Provision of overnight liquidity on an enduring basis at the overnight repo rate also compromised liquidity/treasury planning by banks themselves resulting in this function being in effect shifted to the RBI and thereby stunting the growth of the market spectrum to the overnight segment

<sup>19</sup> It is important to note that available published research on policy reaction functions of the Taylor-type formulation for India have not been estimated using the CPI; the estimates generally relate to either the WPI or the GDP deflator. Moreover, a policy reaction function for India, as in all other countries, employing the interest rate as the policy instrument, tend to have a high coefficient for interest rate smoothing, which is ignored in the analysis here. (see Gabriel *et al.*, 2012, in *Oxford Handbook of the Indian Economy*, C. Ghate, (Ed.), Oxford: New York). Importantly, estimated Taylor rule parameters (or any other empirical estimates) need to exhibit structural stability for a central bank to exploit the estimated relationship for the conduct of policy systematically, but as the Lucas critique suggests, the estimated parameters are often "not structural", *i.e.*, "not policy invariant".

<sup>20</sup> Given the uncertainty about the estimated neutral real interest rate, and assuming that it will be positive for India, a simple positive real policy rate rule may not be anti-inflationary when inflation persistently and sizably exceeds the inflation target. However, in view of the negative real policy rate prevailing in the recent episode of high inflation, the most immediate requirement would be to ensure that the real policy rate becomes positive, and once the regime change is in place, the standard Taylor type rule-based approach with an appropriate weight assigned to inflation could be used by the MPC.

alone, dis-incentivising the development of a term money market; the LAF to a degree has become a conduit for gaming central bank liquidity and substituting for efforts to access market liquidity.

III.56. In order to improve transmission of policy rate changes into the spectrum of interest rates in the economy, the excessive focus on the overnight segment of the money market in the existing framework has to be avoided, which will be possible only if the RBI de-emphasises overnight repos for liquidity management and progressively conducts its liquidity management primarily through term repos of different tenors. Development of a term money market through a term-repo driven liquidity management framework could help in establishing market-based benchmarks, which in turn would help improve transmission, if various financial instruments and, in particular, bank deposits and loans are priced off these benchmarks.

III.57. An overall assessment would, therefore, suggest that in order to imbue credibility and effectiveness into the operating framework of monetary policy in terms of achieving and establishing the nominal anchor (addressed in Chapter II), it is essential to address impediments to transmission (covered in Chapter IV) and deal with the challenges confronting it through design changes and refinements in the operating framework, with flexibility in the use of instruments, particularly in the context of liquidity management and its consistency with the goal(s) of monetary policy.

III.58. The recent experience with the use of exceptional monetary measures to contain exchange market volatility and their subsequent normalization represents a break from the operating framework put in place since May 2011. This experience strengthens the rationale for revamping the operating framework so as to ensure its consistency and synchronicity with monetary policy objectives and stance. The RBI's

current operating framework is pivoted around a target for borrowed reserves in relation to net demand and time liabilities. Conditional upon this operating target, it has allowed bounded movement in the call rate between the term repo rate and the MSF rate, effectively eschewing unlimited accommodation at the repo rate of the past. Increasingly, the term repo is gaining market acceptability, synchronized as it is with the reserve requirement cycle, while allowing a smooth transition away from liquidity provision at the MSF rate. The term repo rate has also proved to be a more useful indicator of underlying liquidity conditions since price discovery of the term premium is through variable rate auctions, unlike the overnight repo rate which is a fixed rate. The successful operation of the term repo rate should incentivize the development of a fuller spectrum of term money segments, thereby enabling market based benchmarks to be established for pricing bank deposits and facilitating transmission of policy impulses to credit markets. The market has also adjusted to the new liquidity management environment well. In this system, full accommodation of liquidity demand continues because of the access to the MSF. It is necessary, therefore, that the MSF rate may be set in a manner that it becomes a truly penal rate, accessed by banks under exceptional circumstances.

### **Recommendations**

III.59. *The Committee recommends that, as an overarching prerequisite, the operating framework has to subserve stance and objectives of monetary policy. Accordingly, it must be redesigned around the central premise of a policy rule. While several variants are available in the literature and in country practices, the Committee is of the view that a simple rule defined in terms of a real policy rate (that is easily communicated and understood), is suitable to Indian conditions and is consistent with the nominal anchor recommended in Chapter II. When inflation is above the nominal anchor, the real policy rate is expected, on average, to be positive. The MPC could*

decide the extent to which it is positive, with due consideration to the state of the output gap (actual output growth relative to trend/potential) and to financial stability.

III.60. Against this backdrop, the Committee recommends that a phased refinement of the operating framework is necessary to make it consistent with the conduct of monetary policy geared towards the establishment and achievement of the nominal anchor (Table III.4).

#### Phase-I

III.61. In the first or transitional phase, the weighted average call rate will remain the operating target, and the overnight LAF repo rate will continue as the

single policy rate. The reverse repo rate and the MSF rate will be calibrated off the repo rate with a spread of (+/-) 100 basis points, setting the corridor around the repo rate. The repo rate will be decided by the MPC through voting. The MPC may change the spread, which, however, should be as infrequent as possible to avoid policy induced uncertainty for markets.

III.62. Provision of liquidity by the RBI at the overnight repo rate will, however, be restricted to a specified ratio of bank-wise net demand and time liabilities (NDTL), that is consistent with the objective of price stability. As the 14-day term repo rate stabilizes, central bank liquidity should be increasingly provided at the 14-day term repo rate and through the introduction of 28-day, 56-day and 84-day variable

**Table III.4: Proposed Operating Framework for Monetary Policy**

	Phase-I	Phase-II
Policy Rate to be announced by the MPC	Repo rate (overnight).	Target policy rate for short end of the money market.
Operating target for monetary policy	Weighted average call rate.	14-day term repo rate.
Liquidity management	Full accommodation (through a mix of specified amounts of overnight repos at fixed rate, and term repos at variable rate) – ECR to be phased out.	Full accommodation (primarily through 14-day term repos at variable rate aimed at achieving the target rate, supported by fine tuning through overnight repos/reverse repos, longer term repos and open market operations). No refinance facility.
MSF – the ceiling of the corridor	As a standing facility, this will be available every day. If adequate liquidity is injected through overnight/term repos, use of MSF will be minimal.	MSF will set the ceiling of the corridor, but must be seen as a truly penal rate. If the liquidity taken during the fortnight through 14-day term repo is managed effectively, there will be rare need for accessing the MSF.
Reverse repo rate	The floor of the corridor – but transition to standing deposit facility will start.	Reverse repo will be used in fine tuning operations <i>i.e.</i> , to impound only daily surplus liquidity from the system to ensure that money market rates do not drop below the policy target rate. Standing deposit facility will replace reverse repo as the floor of the corridor, and reverse repo rates will be close to the policy rate.
Liquidity assessment	By the RBI – based on frictional and structural drivers of liquidity.	Daily reporting by banks (aggregated for the system as a whole) will complement the RBI's assessment of liquidity.



rate auctioned term repos by further calibrating the availability of liquidity at the overnight repo rate as necessary.

III.63. *The objective should be to develop a spectrum of term repos of varying maturities with the 14-day term repo as the anchor. As the term yield curve develops, it will provide external benchmarks for pricing various types of financial products, particularly bank deposits, thereby enabling more efficient transmission of policy impulses across markets.*

III.64. *During this phase, the RBI should fine-tune and sharpen its liquidity assessment with a view to be in a position to set out its own assessment of banks' reserves. This will warrant a juxtaposition of top-down approaches that estimate banks' reserves demand consistent with macroeconomic and financial conditions appropriate for establishing the nominal anchor, and bottom-up approaches that aggregate bank-wise assessments of liquidity needs submitted by banks themselves to the RBI on a daily basis. As these liquidity assessments become robust, they should be announced for market participants prior to the commencement of market operations every day and could be subjected to review and revision during the day for fine-tuning them with monetary and liquidity conditions. It is envisaged that the RBI will expand capabilities to conduct liquidity operations on an intra-day basis if needed, including by scaling up trading on the NDS-OM platform.*

III.65. *Consistent with the repo rate set by the MPC, the RBI will manage liquidity and meet the demand for liquidity of the banking system using a mix of term repos, overnight repos, outright operations and the MSF.*

#### **Phase-II**

III.66. *As term repos for managing liquidity in the transition phase gain acceptance, the "policy rate" voted on by the MPC will be a target rate for the short end of the money market, to be achieved through*

*active liquidity management. The 14-day term repo rate is superior to the overnight policy rate since it allows market participants to hold central bank liquidity for a relatively longer period, thereby enabling them to on lend/repo term money in the inter-bank market and develop market segments and yields for term transactions. More importantly, term repos can wean away market participants from the passive dependence on the RBI for cash/treasury management. Overnight repos under the LAF have effectively converted the discretionary liquidity facility into a standing facility that could be accessed as the first resort, and precludes the development of markets that price and hedge risk. Improved transmission of monetary policy thus becomes the prime objective for setting the 14-day term repo rate as the operating target.*

III.67. *Based on its assessment of liquidity, the RBI will announce the quantity of liquidity to be supplied through variable rate auctions for the 14-day term repos alongside relatively fixed amounts of liquidity provided through longer-term repos.*

III.68. *The RBI will aim at keeping 14-day term repo auction cut-off rates at or close to the target policy rate by supplementing its main policy operation (14-day term repos) with: (i) two-way outright open market operations through both auctions and trading on the NDS-OM platform; (ii) fine tuning operations involving overnight repos/reverse repos (with a fine spread between the repo and reverse repo rate) and (iii) discretionary changes in the CRR that calibrate bank reserves to shifts in the policy stance.*

III.69. *The MSF rate should be set in a manner that makes it a truly penal rate to be accessed only under exceptional circumstances.*

III.70. *An accurate assessment of borrowed and non-borrowed reserves and forward looking projections of liquidity demand would assume critical importance in the framework. So far, the government's*

*cash balances have been the prime volatile autonomous driver of liquidity, making accurate liquidity projections a difficult task. Therefore, continuing with reforms in the Government securities market, which envisage that the debt management function should be with the Government, the cash management function should concomitantly also be with the Government*<sup>21</sup>.

**New Instruments**

III.71. *To support the operating framework, the Committee recommends that some new instruments be added to the toolkit of monetary policy. Firstly, to provide a floor for the new operating framework for absorption of surplus liquidity from the system but without the need for providing collateral in exchange, a (low) remunerated standing deposit facility may be introduced, with the discretion to set the interest rate without reference to the policy target rate. The introduction of the standing deposit facility (analogous to the marginal standing facility for lending purposes)*

*will require amendment to the RBI Act for which the transitional phase may be utilised. The standing deposit facility will also be used for sterilization operations, as set out in Chapter 5, with the advantage that it will not require the provision of collateral for liquidity absorption – which had turned out to be a binding constraint on the reverse repo facility in the face of surges in capital flows during 2005-08.*

III.72. *Secondly, term repos of longer tenor may also be conducted since term repo market segments could help in establishing market based benchmarks for a variety of money market instruments and shorter-term deposits/loans.*

III.73. *Thirdly, dependence on market stabilisation scheme (MSS) and cash management bills (CMBs) may be phased out, consistent with Government debt and cash management being taken over by the Government's Debt Management Office (DMO).*

III.74. *Fourthly, all sector specific refinance should be phased out.*

<sup>21</sup> The Committee on Capital Account Convertibility (1997) recommended the separation of debt management from monetary management. The Advisory Group on Transparency in Monetary and Financial Policies (2000) recognised that separation of debt management and monetary policy is a necessary but not sufficient condition for effective monetary policy which would also require a reasonable degree of fiscal responsibility. The RBI's Annual Report 2001-02 also emphasized that the separation of debt management could greatly facilitate the performance of monetary management by the RBI. The Union Budget for 2007-08 highlighted that "World over, debt management is distinct from monetary management. The establishment of a Debt Management Office (DMO) in the Government has been advocated for quite some time. The fiscal consolidation achieved so far has encouraged us to take the first step. Accordingly, I propose to set up an autonomous DMO and, in the first phase, a Middle Office will be set up to facilitate the transition to a full-fledged DMO." Following this announcement, the Middle Office was established in September 2008 in the Ministry of Finance.