PART TWO: THE WORKING AND OPERATIONS OF THE RESERVE BANK OF INDIA

III MONETARY POLICY OPERATIONS

Monetary policy in 2012-13 had to continue to address the risk to growth while guarding against the risks of inflation pressures re-emerging and adversely impacting inflation expectations. With the liquidity deficit remaining above the comfort level for most of the year due to a mix of structural and frictional factors, the Reserve Bank had to undertake active liquidity management to inject durable primary liquidity through OMOs, and reduction in the CRR and the SLR to ensure adequate credit flow to productive sectors of the economy. After a frontloaded reduction in the policy rate at the beginning of the year and active liquidity management during the year, with the ebb in inflation, the Reserve Bank reduced policy rate further since January 2013 in a calibrated manner taking into account the evolving growth-inflation dynamics. During 2013-14, the Reserve Bank eased monetary policy further in early May, but undertook liquidity tightening measures subsequently to address macro-financial risks from exchange rate volatility.

III.1 The monetary policy stance during 2012-13 sought to balance the evolving growth-inflation dynamics through calibrated easing in the face of a significant growth slowdown, persistent inflationary pressures and rising macro-economic and financial vulnerabilities in the economy. Even as the year started off with a front-loading of the policy rate reduction in April amid concerns of a slowdown in growth, persistent and broad-based inflationary pressures constrained the Reserve Bank in continuing with further monetary easing. The tightening of liquidity conditions due to frictional as well as structural factors during the second half of the year warranted active liquidity management in the form of reductions in the cash reserve ratio (CRR) and statutory liquidity ratio (SLR), and liquidity injections through open market operations (OMOs). By Q4 of 2012-13, with signs of softening of inflationary pressures opening up space for monetary policy, the stance shifted towards addressing the growth risks.

MONETARY POLICY OPERATIONS: CONTEXT AND RATIONALE

III.2 At the start of the financial year, monetary policy had to address a macro-economy where growth had fallen below its pre-crisis trend and inflation, though moderating, was well above the tolerance level of the Reserve Bank. Considering the need to support the growth impulses, the key policy (repo) rate was reduced by 50 basis points to 8 per cent on April 17, 2012. To provide a greater liquidity cushion the borrowing limit of scheduled commercial banks under the marginal standing facility (MSF) was raised from 1 per cent to 2 per cent of their net demand and time liabilities (NDTL).

III.3 By June 2012, it was becoming increasingly clear that inflation would continue to remain sticky and broad-based. Moreover, even as growth continued to decelerate there was growing evidence that the post-crisis trend rate of growth had fallen and that the difference between the actual and trend rate of growth, was relatively small. In such a

scenario, there were significant risks of a resurgence of inflationary pressures if a quick upturn in demand materialised. Further, concerns about macro-economic stability that emanated from the risks of rising fiscal and current account deficits took centre stage in policy analysis. With concerns that lowering of policy rates, without first addressing supply-side gaps and the risks emanating from the twin deficits, would only aggravate inflationary impulses without necessarily stimulating growth, the Reserve Bank paused in its policy rate reductions from June to December 2012.

III.4 Keeping in view that liquidity conditions play an important role in transmission of monetary policy signals, managing liquidity within the comfort zone remained a primary objective of monetary policy through much of 2012-13. In August 2012, the SLR was reduced by 100 bps to ease credit and liquidity conditions followed by a cumulative reduction in the CRR by 75 bps during September 2012 – February 2013 as liquidity conditions became increasingly tight. Further, liquidity support through outright OMOs of ₹1.5 trillion was carried out during 2012-13.

III.5 In Q3 of 2012-13 inflation moderated with indications of further easing in Q4. Further, the low pricing power of corporates, excess capacity in some sectors and indications of softening of international commodity prices suggested that inflationary pressures had peaked. Space for monetary policy to address growth risks was further opened up by fiscal measures to rationalise administered fuel prices as well as by the renewed commitment to adhere to fiscal consolidation roadmap. Hence, key repo rates were lowered in a calibrated manner, by 25 bps each in January and March 2013. However, in March, the Reserve Bank also noted that headroom for further monetary easing was quite limited considering the slow-paced reduction in inflation that could remain range-bound in 2013-14 and the risks emanating from a widening of current account deficit (CAD).

III.6 The Annual Policy Statement for 2013-14 was presented on May 3, 2013 against the backdrop of sharp deceleration of growth in 2012-13 which was much worse than anticipated and the prospects of slow recovery through 2013-14. Headline WPI inflation registered significant moderation by March 2013 and came close to the Reserve Bank's tolerance threshold of 5.0 per cent, although retail inflation as measured by the CPI continued to remain elevated. Keeping in view the accentuated risks to growth along with the gradual softening of inflationary pressures, the key policy rate was reduced by 25 basis points to 7.25 per cent. However, the Reserve Bank also noted that, going forward, the balance of risks coming from an assessment of the growth-inflation dynamics showed little space for further monetary easing considering the significant upside risk to inflation in the near term as also the risks emanating from the CAD and its financing.

III.7 Beginning late May, apprehensions of likely tapering of QE following the comments of the US Fed triggered outflows of portfolio investment, particularly from the debt segment. Several measures were instituted to contain the ensuing exchange market volatility and to reverse unidirectional expectations. First, to curb import demand, import of gold on consignment basis was restricted on June 4 and customs duty was raised on June 5. Second, this was followed up on July 8 with further measures, including restricting banks to trade only on behalf of their clients in currency futures/options markets, tightening of exposure norms, and raising margins on currency derivatives to check speculative activities.

III.8 On July 15, the Reserve Bank put in place additional measures to restore stability to the foreign exchange market. They included raising the MSF rate by 200 bps to 10.25 per cent, restricting the overall access by way of repos under the LAF to ₹750 billion and undertaking open market sales of government securities of ₹25 billion on July 18, 2013. As a contingency measure and in anticipation of redemption pressures on mutual funds, the Reserve Bank opened a dedicated Special Repo window for a notified amount of ₹250 billion for

liquidity support to mutual funds.

III.9 On July 22, the Reserve Bank rationalised import of gold by making it incumbent on all nominated banks/entities to ensure that at least one fifth of imported gold is exclusively made available for the purpose of exports. Any import of gold under any type of scheme will have to follow this 20/80 formula. Consequent to this, the earlier instructions banning the import of gold on consignment basis were withdrawn.

III.10 On July 23, the Reserve Bank modified the liquidity tightening measures by regulating access to LAF by way of repos at each individual bank level and restricting it to 0.5 per cent of the bank's own NDTL. This measure came into effect from July 24, 2013. The cash reserve ratio (CRR), which banks have to maintain on a fortnightly average basis subject to a daily minimum requirement of 70 per cent, was modified to require banks to maintain a daily minimum of 99 per cent of the requirement.

III.11 Considering the need to be ready to pro-actively respond to risks to the economy from external developments as well as taking into account the evolving growth inflation dynamics the Reserve Bank in its First Quarter Review of July 30, 2013 kept its key policy rates unchanged. The continuing weakness in economic activity, particularly in industry and services, made Reserve Bank to revise downwards the growth projections for 2013-14 from 5.7 per cent to 5.5 per cent. Reflecting on the monetary policy stance the Statement indicated the intent of the Reserve Bank to roll back the liquidity tightening measures in a calibrated manner conditional on signs of stability in the foreign exchange market, enabling monetary policy to revert to supporting growth with continuing vigil on inflation.

III.12 The Statement also reiterated that its objective was to contain inflation to a level of 5.0 per cent by March 2014 and to 3.0 per cent over the medium-term

III.13 On August 8, the Reserve Bank augmented its measures to curb foreign exchange market volatility by announcing the decision to auction Government of India Cash Management Bills for a notified amount of ₹ 220 billion once every week.

Liquidity Management

III.14 Liquidity conditions remained in deficit mode throughout 2012-13. Liquidity conditions eased gradually during the first half of 2012-13 and came under stress since mid-November 2012. The average daily net borrowing under the liquidity adjustment facility (LAF), which was 2.2 per cent of average net demand and time liabilities (NDTL) in Q4 of 2011-12, declined sharply to 1.3 per cent in Q1 of 2012-13 and further to 0.7 per cent in Q2 but increased to 1.4 per cent in Q3 and subsequently to 1.5 per cent in Q4. The deficit liquidity conditions were mainly on account of persistent rise in government balances, strong currency demand, the widening gap between deposit and credit growth and advance tax outflow from the banking system. In order to ease the tight liquidity condition, the Reserve Bank initiated several timely and pre-emptive policy measures, such as reducing the CRR and SLR, making purchases under OMO, increasing the limit on the Export Credit Refinance (ECR) facility for scheduled banks (excluding RRBs) and introducing a special export credit refinance facility.

III.15 With the significant reduction in the Government balances with the Reserve Bank and narrowing wedge between credit growth and deposit growth, liquidity conditions improved gradually in Q1 of 2013-14. The Reserve Bank conducted two OMO purchase auctions during Q1 of 2013-14 injecting primary liquidity of ₹165 billion into the banking system. Liquidity conditions eased significantly in June 2013 with the average net borrowings under LAF falling to less than ₹0.7 trillion.

III.16 However, since mid-May, pressure in foreign exchange market began to increase. In order to curb the excess volatility in forex market, the Reserve Bank instituted various liquidity tightening measures on July 15, 2013 and further on July 23, 2013. As a result of these measures, as also the

Government resorting to WMA, LAF deficit declined significantly in July 2013 to less than ₹0.6 trillion. As part of these measures, the Reserve Bank sold ₹25 billion of government securities in open market sales on July 18, 2013.

Monetary Policy Transmission

Call Money Rates and Deposit/Lending Rates of Banks

III.17 During 2012-13, the Reserve Bank reduced the repo rate by 100 bps, the SLR by 100 bps and the CRR by 75 bps. The repo rate was further reduced by 25 bps on May 3, 2013. The impact of these policy measures got transmitted across financial market segments and maturities. As expected, the transmission was faster at the shorter end of the maturity spectrum but slower in the credit market, the latter reflecting the presence of structural imperfections in the market for loanable funds (Table III.1). Also, consistent with the past experience, the speed of transmission was less during the easing phase of monetary policy than during the tightening phase across the various segments of the financial market barring the government securities market; in case of the latter, fiscal consolidation initiatives taken by the Government reducing market apprehension of an excess supply of government securities had the desired impact on G-sec yields during the second half of 2012-13.

III.18 While the Reserve Bank persisted with the easing of monetary conditions through 2012-13, and banks responded by lowering their deposit rates during the first half, the transmission remained weak during Q4, as the number of banks increasing deposit rates across maturities dominated over those that lowered rates during Q4. The government initiatives towards fiscal consolidation resulted in a significant tightening of liquidity conditions during the second half of 2012-13, which pushed up the overnight liquidity deficit under LAF beyond the comfort zone of the Reserve Bank. Banks stepped up efforts to mobilise deposits by raising deposit rates, particularly for shorter term maturity. Real deposit rates, which remained persistently negative since March 2012, turned marginally positive during Q4, reflecting the moderation in inflation. Going forward, a more favourable risk-return ratio in favour of term deposits in the household savings portfolio could improve deposit mobilisation by banks.

Table III.1: Movement in Money Market Rates and Deposit/Lending Rates of Banks

(Per cent)

Items	Mar-10	Mar-11	Mar-12	Jun-12	Sept-12	Dec-12	Mar-13	Jun-13	Variation (percentage points)	
									Tightening Phase	Easing Phase
1	2	3	4	5	6	7	8	9	10	11
I. Policy Rate (Repo Rate)	5.00	6.75	8.50	8.00	8.00	8.00	7.50	7.25	3.75	-1.25
II. Call Rate	3.51	7.15	9.17	8.14	7.92	8.05	7.90	7.24	5.66	-1.93
III. CBLO Rate	3.15	6.46	8.44	7.89	7.83	8.00	7.68	7.10	5.29	-1.34
IV. Market Repo Rate	3.32	6.56	8.69	8.03	7.89	8.09	7.82	7.17	5.37	-1.52
V. 3-Month CP Rate	6.10	10.56	11.61	9.73	8.73	9.03	9.61	8.50	5.51	-3.11
VI. 3-Month CD Rate	5.48	9.92	11.06	9.24	8.38	8.49	9.14	8.11	5.58	-2.95
VII. 5-year Corporate Debt Yield	8.61	9.22	9.47	9.39	9.36	9.08	8.96	8.55	0.86	-0.92
VIII.10-year Corporate Debt Yield	6.61	9.64	9.77	9.65	9.30	8.92	9.01	8.66	3.16	-1.11
IX. 5-year G-Sec Yield	7.54	7.88	8.46	8.22	8.19	8.10	7.94	7.52	0.92	-0.94
X. 10-year G-Sec Yield	7.92	7.98	8.36	8.19	8.18	8.15	7.91	7.34	0.44	-1.02
XI. Modal Deposit Rate	5.00	6.65	7.42	7.40	7.29	7.33	7.31	7.26	2.42	-0.16
XII. Modal Base Rate	8.00*	9.50	10.75	10.50	10.50	10.50	10.25	10.25	2.75	-0.50

*: Data relate to July 2010 as Base Rate was introduced since then.

Note: Policy rate, deposit and base rates are at end-month while money and bond market rates are monthly average. Tightening phase in Table is from March 19, 2010 to April 16, 2012 and easing phase from April 17, 2012.

Source: Bloomberg for CP, CD and bond market rates, and the Reserve Bank for other rates.

III.19 As far as lending rates were concerned, the transmission appeared to be somewhat faster than deposit rates. The modal base rate of banks declined by 25 bps in Q4 on top of a similar reduction in Q1. The weighted average lending rate (WALR) of banks too declined at a faster pace as compared with deposit rates largely reflecting the lower demand for credit owing to deceleration in economic activity (Table III.2).

III.20 During Q1 of 2013-14, the modal term deposit rate of SCBs declined marginally by 5 bps, following reduction in the repo rate by 25 bps on May 3, 2013 and easing of liquidity conditions. Although the modal base rate remained unchanged at 10.25 per cent in Q1, WALR on the outstanding rupee loans of SCBs declined by 6 bps to 12.07 per cent during Q1 (Table III.2)

Sectoral Lending Rates

III.21 The pass-through of monetary policy actions was not uniform across sectors in terms of lending rates during 2012-13. The lending rates declined in the range of 1-63 bps for some of the select sectors, with sharpest decline in education loan (63 bps) and home loan (62 bps). Lending rates in other sectors such as vehicle, SMEs and credit card witnessed only marginal decline (Table III.3). During Q1 of 2013-14, the lending rates declined by 40 bps in credit cards, 32 bps in housing loan and 4 bps in SME loans while it increased for vehicle loan, agricultural loan and educational loan during the same period.

Table III.2: Modal Deposit Rates and WALRs of SCBs (Excluding RRBs)

(per cent)

Month-end	Repo Rate	Modal Deposit Rate	WALR
1	2	3	4
Mar-12	8.50	7.42	12.60
Jun-12	8.00	7.40	12.35
Sep-12	8.00	7.29	12.26
Dec-12	8.00	7.33	12.14
Mar-13	7.50	7.31	12.13
Jun-13	7.25	7.26	12.07

WALR: Weighted average lending rate.

Table III.3: Sectoral Median Lending Rates of Scheduled Commercial Banks
(at which 60 per cent business is contracted)

(Per cent)

Month end	Home	Vehicle	Agri-culture	SME	Credit Card	Education
1	2	3	4	5	6	7
Mar-12	11.87	12.75	11.74	13.00	27.09	13.63
Jun-12	11.63	12.78	11.38	12.88	28.39	13.30
Sep-12	11.63	12.75	11.63	12.84	26.42	13.23
Dec-12	11.43	12.68	11.43	12.99	27.89	13.10
Mar-13	11.25	12.71	11.63	12.99	27.07	13.00
Jun-13 (P)	10.93	12.85	11.67	12.95	26.67	13.12
Variation (March-13 over March-12)	**-0.62**	**-0.04**	**-0.11**	**-0.01**	**-0.02**	**-0.63**

P: Provisional.

Asymmetry in Monetary Policy Transmission

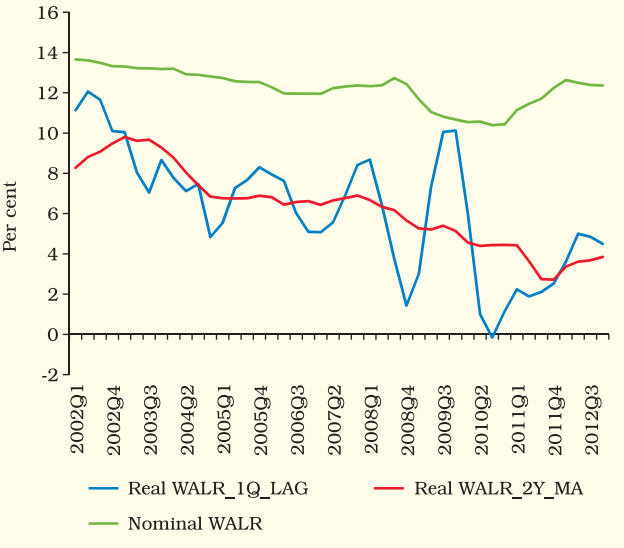
III.22 A liberalised financial system - where banks have freedom in fixing their deposit and lending rates - poses challenge to the monetary authority to ensure effective transmission of its policy signals to the real economy. Such challenge could be in terms of addressing the structural constraints – in addition to the frictional factors - impeding the credit channel. Factors inhibiting transmission, *inter alia*, include interest cost on outstanding deposits, size of government borrowing, level of NPAs and inflation. The administered interest rates on small savings which, though linked to G-sec yields, are reset only at an annual frequency and thus imparts rigidity to the rate fixation by banks.

III.23 During 2012-13, the pace of transmission of monetary policy signals slowed down considerably, particularly during Q4, partly reflecting the asymmetric response of banks to the hardening and the easing phases of policy cycles against the backdrop of tightening of liquidity conditions (Table III.1). Usually, during the upward phase of the interest rate cycle, banks are quick in raising their lending rates while in the downward phase of the interest rate cycle, banks are quick in reducing their deposit rates to protect their NIMs. This is particularly so, as loans, being mostly flexi-

price, are re-priced at a quicker pace than the fixed rate bank deposits. However, in the presence of tight liquidity conditions and structural rigidities, deposit and lending rates did not decline on the expected line unlike other segments of the financial market.

III.24 On the supply side, the change in depositors' preference from financial savings of banking system to gold in search of higher returns, may also be one of the inhibiting factors in the transmission channel of deposit and lending rates.

Chart III.1: Estimated Weighted Average Lending Rates - Real and Nominal



Real Interest Rate in India

III.25 Reflecting the anti-inflationary stance of monetary policy in 2011 and 2012, the weighted average nominal lending rates increased, with usual transmission lags. Real lending rates (derived alternatively by using two year moving average inflation and one quarter lagged inflation), were lower than the real rates prevailing during the high growth phase of 2003-08 (Chart III.1). This trend in real interest rates brought to the fore the issue of causal relationship between real interest rate, investment and economic growth. Empirical estimates for India suggest that for 100 bps decline in real lending rates (or cost of finance for corporates), investment could be stimulated by about 50 bps, and non-agricultural GDP growth could improve by about 20 bps (Box III.1). Since the second half of 2012-13, with softening of inflation, the ex-post real interest rates have started edging up. If inflation remains range bound around 5.5 per cent in 2013-14, only with stronger transmission of the 125 bps cut in repo rate since April 2012, that the real lending rates may decline to support growth.

Box III.1
Sensitivity of Investment and Growth to Change in Real Interest Rate

The real interest rate is an unobservable variable, and firm level investment decisions are generally driven by nominal variables, *i.e.* assessment of nominal cash flows on a new investment project and the nominal hurdle rate relative to the internal rate of return (IRR). IRR is the rate of discount which equates discounted cash flows with the initial investment value of a project, or in other words, it is the rate of discount at which net present value (NPV) of the project is zero. Only if the firm is able to borrow at an interest rate that ensures that the hurdle rate remains less than the IRR, the NPV of the project will be positive and it would make sense to undertake the project. Depending on the assumed inflation expectations implicit in the cash flows and the hurdle rate, there would invariably be a real interest rate, which may not be explicitly recognised. At the level of the overall economy, however, real variables like investment and growth are generally believed to be influenced by the real interest rate. Nominal variables like the policy interest rate can influence the real interest rate in the short-run, and at times the impact may persist if the Fisher effect does not hold. According to the Fisher effect, changes in nominal interest rate reflect only revised inflation expectations, and if the nominal rates do not adjust one for one to changing inflation conditions, real interest rates may vary. For the purposes of policy analysis, thus, two important issues could be: (a) whether the nominal interest rate implicit in the hurdle rate is lower than the IRR in a phase of slowdown in economic activities, rather than whether nominal interest rate is lower relative to the levels prevailing during the high growth phase, and (b) whether the manner in which monetary policy responds to changing inflation situation is a key factor behind time varying real interest rates.

The related empirical issue then is if the real interest rate can be influenced by monetary policy, how sensitive the investment and growth may be to changes in real interest rates. OLS

(Contd...)

estimates suggest that for 100 bps reduction in real lending rate (WALR1QLAG), non-agricultural GDP growth (NAG) could improve by about 9 bps in the short-run and by about 20 bps in the long run (Table 1). The higher value of the coefficient for inflation exceeding a threshold level of 6 per cent (INFLTR) offers a key policy inference, *i.e.* any monetary policy stance of tolerating high inflation to lower real interest rates may fail to stimulate growth, since the positive impact of lower real interest rate on growth would be more than offset by the adverse impact of high inflation on growth.

The OLS results indicate that for 100 bps decline in real lending rate, investment to GDP ratio (IGDP) may get stimulated by 9 bps in the short-run and 51 bps in the long-run (Table 2).

Empirical estimates for India point to the scope for improving growth and investment by lowering real interest rates. Lower real interest rates could result from aggressive easing of monetary policy (which may be constrained by inflation persistence), or faster transmission of the repo rate cuts already effected since April 2012 to lending rates, or higher inflation tolerance (*i.e.* allowing higher inflation to lower real rates). Of these three possibilities, the first and last ones, which are effectively similar, entail the risk of not improving growth despite delivering lower real interest rates. A low and stable inflation environment, therefore, is more conducive to growth than a lower real interest rate that is attained through higher inflation tolerance.

Table 1 : OLS Estimates of Non-agricultural GDP Growth (NAG)

	Coefficient	t-Statistic
1	2	3
C	3.77	2.14*
NAG(-1)	0.54	3.27*
WGDP	0.18	4.40*
WALR1QLAG(-1)	-0.09	-2.35*
INFLTR(-1)	-0.12	-2.26*
D(NFCGDP_SA(-4))	0.09	3.80*
D2009Q3	2.45	18.50*
$\bar{R}^2$	0.61	
Durbin's m	0.30	
SE of regression	0.93	
No. of Observations	40	

Note: t-statistics are based on HAC standard errors corrected with Newey-West/Bartlett window and 3 lags.
* : Significant at 5% level.

Table 2 : OLS Estimates of Investment Rate (Dependent Variable: IGDP)

	Coefficient	t-Statistic
1	2	3
C	4.40	4.97*
GDPG(-1)	0.15	2.85*
WALR1QLAG(-1)	-0.09	-3.46*
INFLTR	-0.04	-1.88**
IGDP(-1)	0.83	25.93*
DCRISIS	-1.95	-7.18*
∆NFCGDP(-4)	0.09	4.33*
$\bar{R}^2$	0.94	
Durbin's h	-0.87	
SE of regression	0.73	
No. of Observations	40	

Note: t-statistics are based on HAC standard errors corrected with Newey-West/Bartlett window and 3 lags.
*, **: Significant at 5% and 10% level, respectively.

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Inflation Expectations

III.26 Inflation expectations or perceptions about inflation in the future affect the current behaviour of economic agents. If inflation expectations are unanchored or there is growing uncertainty regarding future price level, individuals may be typically reluctant to spend while corporates may withhold investments. This is detrimental to economic growth in the long run. A central premise of monetary policy is that low and stable inflation and well-anchored inflation expectations contribute to a conducive investment climate and consumer confidence, which is key to sustained growth on a higher trajectory in the medium-term. Hence, measurement of inflation expectations becomes crucial from the monetary policy perspective (Box III.2).

Box III.2
Measurement of Inflation Expectations

Inflation expectations are difficult to measure as they cannot be observed in time. Hence most central banks have in their armoury a range of approaches for gauging inflation expectations, ranging from survey-based methods to extracting them from financial, markets-based indicators.

Among the widely used market-based measures of inflation expectations are 'break-even' expectations based on inflation-indexed bonds or 'links' as they are popularly called. The basic premise is that these bonds provide protection to investors against inflation. Unlike traditional bonds which pay coupon on a fixed principal, inflation-indexed bonds pay coupons and/or principal that is adjusted for inflation. The difference in the yields on inflation-indexed bonds and those on conventional bonds of same maturity is an indicator of inflation expectations.

In India, capital-indexed bonds of five years maturity were issued in December 1997. However, these bonds provided inflation protection only to the principal by indexing the principal repayments at the time of redemption to inflation. As interest payments were not protected against inflation, there was tepid response to them and no subsequent issuances were made.

The Reserve Bank once again issued inflation-indexed bonds in June 2013. These bonds provide protection to both principal and interest against wholesale price inflation. Inflation protection is offered on the principal by adjusting it by the ratio of the price index on the settlement date to price index on the issue date. Since a real coupon will be paid on the inflation-adjusted principal, interest receipt will also be protected against inflation. Further, the bond will also offer capital protection as on redemption, the higher of the inflation-adjusted principal or face value will be paid to the investor.

The initial tranche of issuances will be for bonds of ten years maturity. The investors have to bid for real yields as against nominal yield in the case of conventional government securities. Based on two issuances, back-of-the envelope calculations suggest that 10-year inflation expectations are close to 5.5 per cent. As and when more issuances take place for various maturities, the bonds will provide more benchmarks.

Another way is to have survey-based measures of inflation expectations of households, corporates and professional forecasters. The survey-based measures of inflation expectations in India are summarised below. All these surveys have a quarterly frequency and form inputs for the quarterly reviews of the monetary policy.

Currently, the survey-based methods have proved useful in guiding the conduct of monetary policy in India. These surveys are being constantly refined in order to boost their usefulness as measures of inflation expectations thereby gleaning vital inputs for monetary policy formulation. Inflation-indexed bonds are just testing the waters, in due course they should emerge as an important toolkit in the measurement of inflation expectations.

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Survey-based Measures of Inflation Expectations in India

Name of the Survey	Commenced in	Coverage	Period for which Expectations Assessed
1	2	3	4
Industrial Outlook Survey	1998	2,000 manufacturing companies approached in each round (response rate is around 70 per cent)	3-month ahead
Inflation Expectations Survey of Households	2005	4,000 urban households across 12 cities (recently increased to 5,000 households across 16 cities)	3-month ahead and 1-year ahead
Survey of Professional Forecasters	2007	About 30 professional forecasters	Quarterly for next 4 quarters; next 5 years and next 10 years
Consumer Confidence Survey	2010	5,400 households across 6 metro cities	1-year ahead

Overall Assessment

III.27 Monetary policy during 2012-13 and 2013-14 so far has sought to maintain a balance between addressing growth risks while not losing sight of the primary objective of managing inflation and anchoring inflation expectations. Low and stable inflation is needed for securing a high and sustainable medium term growth path. Monetary policy tried to use the available space to front-load policy rate reductions and calibrate the easing cycle, being mindful of the macro-economic risks emanating from the twin deficits. With the aim of ensuring efficient transmission of policy actions consistent with the growth-inflation balance, active liquidity management through multiple instruments was also undertaken in 2012-13.