Monetary Policy:
Its Changing Objectives, Instruments and Results

Manmohan Agarwal

Irfan Shah

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Abstract: This paper seeks to examine how the objectives of monetary policy have changed over the years from one of supporting public investment to one of inflation control and still later to inflation targeting. It then goes on to analyse how the conduct of monetary policy has changed as the objectives have changed. Finally, we study the effect of these changes in monetary policy regimes on outcomes, growth and inflation particularly.

I: Shifting Monetary Policy

For more than two decades after independence the objective of monetary policy was to enable the financing of the government's planned investments. The Second and Third Plans, which covered the years from 1956 to 1966, were based on maintaining material balances through the use of an input-output matrix. It was believed that as long as these material balances were observed supply and demand would match and inflation could not occur.[1] It was, however, recognized that large amounts of deficit financing might be unwise and lead to higher rates of inflation.[2] Consequently, when the country ran out of foreign exchange reserves, the accumulated sterling balances, the size of the Second plan was reduced. The faith that inflation could be controlled seemed to be borne out by experience as the average annual rate of inflation was only 2.1 per cent between 1951-52 to 1963-64.

[*] *Adjunct Senior Fellow, RIS and RBI Professor, Centre for Development Studies, Thiruvananthapuram. Email: manmohan44@gmail.com*

[**]*Researcher, Centre for Development Studies*

But soon external events resulted in much higher rates of inflation, it averaged 10.2 per cent between 1965-66 to 1974-75. The initial jump in the rate of inflation was due to a severe drought in 1965-66 and 1966-67. Due to the drought/agricultural production declined and even large imports of almost 10 million metric tonnes could not prevent the price increase. Furthermore, taxes had to be raised following the wars with China and Pakistan. The increase in the prices of oil and of many primary commodities including wheat which had to be imported in large quantities in 1973-74 resulted in the wholesale price index increasing by 24.7 per cent in 1974-75. This forced the government to adopt very contractionary monetary and fiscal policies that resulted in a decline in wholesale prices the following year. Also the government adopted a system of monetary targeting; but the basis of this targeting was not revealed.

At this time, in the mid-1970s, the country had accumulated considerable stocks of both foreign exchange and food. Furthermore, there was considerable excess capacity in public sector units producing basic intermediate and capital goods.[3] Many analysts contended that there was a lack of demand in the economy (Chakravarty, 1974) and the government could increase expenditures. The new Government that came to power in 1980 did increase expenditures and for the first time India had a deficit in the current budget and this deficit tended to grow. Since there was no active market for government bonds as the return on these was low, the deficit was financed either by money creation by direct borrowing from the Reserve Bank or from commercial banks. The monetary effect was sought to be neutralized by raising the required cash reserve ratio (CRR), this lowered the money multiplier and so limited the increase in the money supply following borrowing from the Reserve Bank. Alternatively, the banks were forced to lend to the government as the statutory liquidity reserve was increased.[4] This was the amount that banks had to hold in the form of government bonds so it was forced lending to the government at low rates of interest. The amount of domestic credit that was pre-empted by the government kept increasing

in the 1980s. This made it difficult for the central bank to control the money supply and so inflation. The average rate of inflation during the late 1970s was 8.4 per cent. Though the rate of inflation declined during the early 1980s it was very unstable and very high in some years. Under these conditions a Committee was established headed by Prof. Sukhamoy Chakravarty[5] to look at the working of the monetary system in India and make recommendations for reform. According to the Chakravarty Committee Report (RBI 1985), both increases in money supply and structural bottlenecks caused inflation in India. The single most important feature of the monetary system since the 1970s was the phenomenal increase in reserve money, mainly due to RBI credit to government. The only instrument with the RBI to control the money supply was to control the money multiplier by raising the CRR. But after the mid-1970s the money multiplier was stabilised at below 3.

The Committee recommended the adoption of a flexible monetary targeting approach (MTA) with M_3 as intermediate target, reserve money as operating target and bank reserves as operating instruments (Mohan, 2008). But the committee did not recommend a strict money growth target. Instead it recommended a flexible approach where the target M_3 should be modified based on emerging trends in output and inflation (Bhattacharya 2006). Also, the central bank had sought to control credit in order to ensure that adequate credit was available to support production activities without fuelling inflation.[6] However, the Committee recommended a monetary target rather than a credit target.

So broadly speaking, the Committee recommended a MTA with feedback to improve coordination between the RBI and the Government of India to contain the fiscal deficit and to control the automatic monetisation of deficits. It also recommended a structure of interest rates, both short term and long term interest rates. These interest rates were to be tied to the rate of inflation so that investors in savings accounts and government securities earned a positive return.

The recommendations of the Committee were accepted; a flexible MTA approach was adopted with M_3 as an intermediate target, reserve money as the operating target and bank reserves as operating instruments. However, the policy was not successful in controlling the rate of inflation which averaged almost 9 per cent in the late 1980s and early 1990s. As in the case of other countries the policy faced the drawbacks of an unstable money demand function and financial liberalization/Innovations. This approach, however, lasted till 1997-98.

India formally shifted from the MTA to monetary indicators approach (MIA) in April 1998. One of the reasons for this shift was instability of the money demand function in the post-liberalization period due to large capital flows and financial innovations, (Goyal 2011). But Bhattacharya, (2006) argued that the major need of the MTA was not the monetary target per se, but to develop coordination between the RBI and the government in order to check automatic monetisation within a defined limit. As the coordination was operationalised in 1997, a shift in monetary policy framework from MTA to MIA became affordable. The MIA was also favored over MTA because it was better to consider both financial and economic variables in determining a policy perspective rather than sticking to a single variable, (Bhattacharya, 2006; Inoue, 2010; Cristadoro and Veronese, 2011). MIA besides monetary aggregates included other variables such as interest rates in the financial markets along with movements in currency, bank credit, fiscal position, trade, capital flows, inflation rate, output, exchange rate, refinancing and transaction in financial markets to draw its policy perspective, (Bhattacharya, 2006; Inoue, 2010).

The shift from the MTA towards the MIA was actually abandonment of the monetary target (M_3) and a shift from an explicit to an implicit target (Bhattacharya, 2006). This policy was in line with international financial practice as followed by the Fed and ECB where inflation is an implicit target. The RBI changed its operating procedure following the Narasimham Committee- II (1998) report from direct instruments

(interest rate regulations, selective credit controls and cash reserve ratio) to indirect instruments (repo operations under Liquidity Adjustment Facility and Open market operations), (Mohanty, 2013; Mishra and Mishra, 2012). This change was made in order to communicate a strong signal to market participants that the RBI was changing the way it would implement its monetary policy, (Bhattacharya, 2006). There was a shift from quantity based to price based signals.

But this meant that markets were not always clear as to what the Reserve Bank was reacting to and seeking to achieve when it changed its policy. The signals were confusing and since a major objective of monetary policy is to anchor expectations, there were further changes.

The Fiscal Responsibility and Budget Management Act, (FRBMA) was passed in 2003. It sought to provide a path towards a reduced deficit and to provide investors with better information regarding the government's financing requirements. The final target was a deficit equal to 3 per cent of GDP. It was meant to institutionalize financial discipline. It sought to improve macroeconomic management by reducing the fiscal deficit.

In order to manage day-to-day liquidity, the RBI adopted the Interim Liquidity Adjustment Facility (ILAF) in April 1999. This facility was adopted to create an informal corridor for the overnight interest rate or the call money rate and to guide other money market interest rates.[7] The corridor was created so that the liquidity injection was done at the bank rate which was used as the marginal lending facility and the surplus liquidity was absorbed or withdrawn at reverse repo rate, (Mohanty, 2011; Cristadoro and Veronese, 2011). The ILAF was gradually transited into a full-fledged Liquidity Adjustment Facility (LAF) in 2004 which was operated through overnight repo and reverse repo rate.[8] This was a clear indication that the interest rate was becoming an effective target of monetary policy (Patra and Kapur, 2010). Further modifications were the introduction of marginal standing facility which served as a safety valve

where the scheduled commercial banks can borrow up to 1 per cent of their net demand and time liabilities at their discretion when the funding from LAF is exhausted[9]. It also safe-guards the scheduled commercial banks against liquidity shock.

These changes were carried out to give a clear signal to market participants about the RBI's focus on repo rate and reduce the confusion arising out of the policy rate lying between repo and reverse repo rate, (Mohanty, 2011). Thus, the new operating procedure of monetary policy helped in effective implementation and transmission of monetary policy announcements in the following ways: a) managing liquidity on a daily basis by injecting and absorbing liquidity using repo and reverse repo rate; b) restricting movements of the overnight call rate within the corridor; c) providing flexibility to RBI in determining the quantum of adjustment and rates in order to respond to the needs of the system on a daily basis, (Mishra and Mishra, 2012).

With these the system sought to mange both long term and short term monetary policy. The long term policy was geared towards restricting the government's access to credit thereby providing a stable system of credit for the private sector. The short term liquidity needs of banks were provided by the LAF. Under it a bank facing a shortage of reserves could borrow from the Reserve Bank by pledging its securities and at the same time committing to repurchase these securities in the near term future, which may be as short a term as a day.

But in the changing global scenario with increasing openness and large capital flows, the efficiency of MIA came under attack. Earlier the sterilization operations of foreign capital were done through open market operations (OMO) which were shifted to LAF. Since the LAF was used to manage liquidity on a daily basis, Market Stabilization Scheme (MSS) was introduced in 2004 to absorb liquidity on a more enduring but temporary basis. But under MSS there was incomplete sterilization which increased money supply, fuelled inflation and also increased interest costs of MSS, (Mishra and Mishra, 2012). The MIA was also

criticized for its multiplicity of objectives which were giving confusing signals to the market as to which variable RBI will choose to defend. Against all this, there was an increasing demand to change the policy framework so as to ensure a forward looking transparent monetary policy with credibility and accountability, and inflation targeting encompasses them all, (Mishra and Mishra, 2012).

More recently, following the Urjit Patel Committee Report (UPCR) (RBI, 2014) the Reserve Bank has adopted an inflation targeting approach (ITA).[10] The target is set at 4 per cent with a margin of 2 per cent on either side. The main aim of the ITA is to anchor inflationary expectations, reduce uncertainty and achieve price stability. Besides, it guarantees transparency, credibility and accountability. The transparency of the bank is maintained by making regular and clear announcements, issue regular policy reports and maintain credibility in achieving the targets[11]. But, it should also be noted that the credibility of the central bank is achieved slowly and not established immediately, (Mohan, 2008). As Mishkin (2001) argued that credibility is not a free lunch of inflation targeting but is achieved though short-run losses in output and employment. Bernanke et al. (1999) also stressed that it is not merely announcements which provide credibility but earning it through achieving the target.

It, no doubt, remains a matter of concern whether the RBI through its ITA can achieve its target. It is so because certain prerequisite conditions which are necessary for ITA are absent in India. These include inflation index (WPI or CPI), core inflation index[12], well developed forecasting and transmission mechanism. Also, it is increasingly realized that the food and fuel inflation (which is very volatile and where monetary authority has a limited control) play a much greater role in India.

The UPCR (RBI, 2014) came up with certain new measures by constructing a new inflation index CPI (combined) to anchor inflationary expectations (Para No: II. 36). The index comprises of Consumer Price Index - Rural Labourers (CPI-RL) and Consumer Price Index - Urban Non-manual Labourers (CPI-UE) which includes the cost of living of the

rural as well as the urban population. Although the CPI (combined) is a headline inflation index, the RBI has decided to consider it as a nominal target and to try to achieve it. India adopted flexible ITA in which price stability is the primary concern while keeping in mind the objective of growth (Gupta, 2016).

II: Outcomes of Monetary Policy in India

In order to understand the outcome of the monetary policy, we broadly analysed the period from 1970-71 to 2015-16. The rationale for choosing this period is that till 1970, there was no particular framework of monetary policy in India. During 1970, the RBI adopted MTA but MTA with an explicit monetary target (M_3) was adopted only in 1985 after the recommendations of Chakravarty Committee Report (RBI, 1985). In 1998-99, there was a shift to MIA and recently in 2014-15 after the recommendations of Urjit Patel Committee Report (RBI, 2014) the RBI adopted flexible ITA. In the background of these shifts in the monetary policy approaches, we tried to analyse how various economic indicators have been affected during these periods. We also divided the recent period from 1998 onwards into three sub-periods. The first period is from adoption of MIA in 1998-99 till 2003-04 because of the implementation of FRBM Act (2003) and LAF (2004). The next period is from 2004-05 till the global financial crisis (GFC) in 2007-08 and the last period takes into account post-GFC period. The categorization of the periods is as follows:

- 1970 to 1984-85 (Shift to MTA)
- 1985-86 to 1997-98 (Adopting MTA with M_3 as explicit target)
- 1998-1999 to 2015-16 (Shift from MTA to MIA)
- 1998-99 to 2003-04 (FRBM act and LAF)
- 2004-05 to 2007-08 (Global Financial Crisis)
- 2008-09 to 2015-16 (Post-GFC).

The institutional arrangements under which monetary policy is conducted and its operating principles have evolved over the past decades, are there in Table 2.1.

Table 2.1: Instruments and objectives of Committees on Monetary Policy

Committee	Approach	Instruments	Objectives
Chakravarthy Committee (1985)	Monetary Targeting Approach (MTA)	• Use of CRR to control rising money supply • Structure of interest rates	• To tame money supply in order to check rising inflation • To ensure adequate flow of credit to production activity • To contain fiscal deficit • To control automatic monetisation of deficits
Narasimham Committee Report-II (1998)	Monetary Indicators Approach (MIA)	• Repo operations under Liquidity Adjustment Facility • Open market operations	• To improve efficacy by considering financial and economic variables than just financial variables • To communicate strong signal to market participants • To make inflation an implicit target than an explicit target
Fiscal Responsibility and Budget Management Act, 2003	Liquidity Adjustment Facility (LAF)	• Repo transactions • Marginal standing facility	• To limit the deficit, so government's borrowings • To provide investors with information regarding government's financial requirements. • To manage liquidity on daily basis by injecting and absorbing liquidity • Restricting the movement of the overnight call rate within a band
Market Stabilization Scheme (MSS), 2004	Liquidity Adjustment Facility (LAF)	• Open market operations	• To ensure a forward-looking transparent monetary policy • To absorb liquidity on a more enduring basis than daily liquidity management under LAF
Urijit Patel Committee (2014)	Inflation Targeting Approach (ITA)	• Inflation index covering rural as well as urban population	• To anchor inflationary expectations, reduce uncertainty and achieve price stability • To guarantee transparency, credibility and accountability in the form of regular and clear announcements.

Source: Authors' compilation.

The categorization of the periods is in consonance with the structural breaks in the economy as shown by different indicators (Table 2.1). But it is not clear whether the structural breaks led to shifts in monetary policy approaches or the other way round.

Table 2.2: Multiple structural breaks of different economic indicators

Variable	Structural Breaks
Reserve Money	1977,1984, 1990, 1998 and 2004
M1	1978, 1984, 1991, 1997,2003
M3	1979, 1986, 1994, 2004, 2010
GFD of Central Government	1977, 1983, 1997, 2008
RBI Credit to Central Government	1977, 1983, 1990, 1999, 2005
Interest Rate	1976, 1997 and 2006
GDP Growth Rate	2005
CPI Inflation	1999, 2009
Reserves of RBI	1993, 2001
Current Account Balance	2002 and 2010
WPI Inflation	No structural break

Source: Authors' compilation.

The economic indicators that are used for the analysis include Gross Fiscal Deficit as a per centage of GDP (GFD), RBI credit to government (Centre and State), Reserve/high powered money (H), Narrow and Broad money supply (M_1 and M_3), Inflation rate (Inflation), GDP Growth rate (Growth), Discount Rate, Gross Capital Formation as a per centage of GDP (GCF), Current Account Balance as a per centage of GDP (CAB) and Reserves of RBI as a per centage of GDP (CAB). In Table 2.3 and 2.4 we show the average changes in these variable during the given time periods.

Table 2.3: Per centage change in different economic indicators

Period	GFD*		RBI Credit		H	M1	M3	Inflation*	Growth
	Centre	State	Centre	State					
1970 to 1984-85	4.34	2.18	9.03	0.66	14.69	12.74	16.97	8.65	3.97
1985-86 to 1997-98	6.38	2.75	12.06	0.32	15.55	16.05	17.23	9.11	5.54
1998-99 to 2015-16	4.82	2.91	3.54	0.14	13.6	13.51	16.19	7.08	6.98
1998-99 to 2003-04	5.49	4.12	5.58	0.37	11.62	12.91	16.33	5.39	6.01
2004-05 to 2007-08	3.43	2.27	-0.71	0.06	20.97	17.98	18	5.36	8.85
2008-09 to 2015-16	5	2.32	4.15	0.01	11.39	11.75	15.18	9.51	6.69

Source: Authors' compilation.

*GFD is from 1970-71 and Inflation from 1971-72 onwards

Table 2.4: Per centage increase in different economic indicators

Period	Deposit rate	Lending/ Discount rate	Gross Capital formation	CAB	Reserves of CB as Per centage of GDP
1970 to 1984-85	7.24	8.31	5.4	-0.54	0.34
1985-86 to 1997-98	10.28	10.87	5.67	-1.61	0.47
1998-99 to 2015-16	7.79	7.07	2.69	-1.27	1.94
1998-99 to 2003-04	7.62	7.3	3.14	0.28	2.37
2004-05 to 2007-08	6.97	6	2.52	-0.97	4.15
2008-09 to 2015-16	8.32	7.43	2.44	-2.59	0.51

Source: Authors' compilation.

The adverse effects of GFD on price stability has been a major concern to RBI mainly because there is a self-perpetuating process of deficit-induced inflation and inflation-induced deficit, (Sarma 1982; Jhadav 1994; Rangarajan and Mohanty 1998). Deficits mostly lead to a rise in money supply as they are financed by the RBI credit to government which is an important component of reserve money. The increase in reserve money leads to an increase in money supply through money multiplier process. The correlation coefficient between reserve money and money supply (M_1 and M_3) from 1970 to 2015 is found to be 0.99. Although money supply can fall if government borrows from the market to finance its deficits but from the data we found that in pre-reform period money supply and RBI credit to government was high while in the post-reform period the increase in money supply was mostly due to increased foreign reserves. This increase in money supply may affect both inflation as well as growth of the economy. Table 2.3 and 2.4 depict various changes in the economic indicators in different periods from 1970 to 2015.

During the period from 1970 to 1984-85, the GFD as a per centage of GDP to central government was 4.84 while for states it was 2.18 per cent. These deficits were mainly financed by the RBI and hence the RBI credit to central government was 9 per cent of GDP and 0.66 per cent of GDP to states. The high credit to government by RBI led to an average increase in the reserve money by 14.67 per cent which further increased the money supply M1 by 12.74 per cent and M3 by 16.97 per cent ,respectively. The inflation during this period increased by 8.65 per cent but the average growth rate of the economy was just 3.97 per cent. Because of the closed nature of the economy foreign reserves were very low about 0.34 per cent of GDP.

In the next period from 1985-86 to 1997-98 despite the changes in monetary policy following the adoption of MTA by targeting M3, things did not change much. The GFD during this period increased compared to the previous period from 4.34 per cent to 6.38 per cent while for state government, it increased to 2.75 per cent compared to 2.18 per cent. These

rising deficits were financed by the RBI and thus there was an increase in RBI credit to the government to 12 per cent which increased reserve money as well as the money supply. Despite adopting MTA the average growth rate of M_3 during this period was 17.23 per cent, inflation rose to 9.11 per cent while the growth rate of GDP increased to just 5.5 per cent. From 1998-99 onwards after adopting MIA, the GFD of central government reduced to 4.82 per cent but for state government it increased to 2.91 per cent. Although the GFD declined, still on an average it was relatively high. The important thing during this period was the sharp fall in RBI credit to government which sharply declined from 12 per cent to just 3.5 per cent of GDP. This fall in RBI credit was not followed by a sharp fall in reserve money which increased at an average growth of 13.6 per cent. The main reason for this was the surge in foreign exchange reserves. The reserves of the central bank during this period increased from 0.47 per cent to 1.94 per cent of GDP. Inflation rate and the growth of the economy increased at around 7 per cent of GDP with a falling gross capital formation.

We also analysed the recent period by dividing it into three sub-periods. During the first period from 1998-99 to 2003-04 the GFD was higher along with high RBI credit to government and the money supply as well. The inflation was around 5.3 per cent with 6 per cent growth of the economy but things changed drastically during 2004-05 till the global financial crisis in 2007-08. The GFD reduced to all time low at 3.43 per cent while the RBI credit to central government declined -0.71 per cent. What was more surprising during this period was the phenomenal increase in reserve money which increased at a growth rate of 20.97 per cent followed by 18 per cent increase in money supply (M1 and M3). The main reason for this increase was the increase in foreign reserves of RBI which increased to 4.15 per cent of GDP during this period. Inflation during period slowed down to 5.36 per cent but the growth rate of the economy increased to 8.85 per cent.

In the aftermath of GFC from 2008-09 to 2015-16, the average GFD again increased to 5 per cent which increased the RBI credit to central

bank above 4 per cent. There was a sharp fall in the foreign exchange reserves from 4.15 per cent to 0.51 per cent of GDP. The growth rate of reserve money has come down to 11.39 per cent with M1growing at 11.75 per cent and M3 at 15.18 per cent. The major problem during this period was the rising inflation and declining output growth of the economy. The inflation during this period increased to 9.51 per cent while the growth declined to 6.69 per cent. Comparing the pre and post-GFC period, it is observed that in the pre-crisis period, there was fall in inflation along with rise in the growth of economy while in post-crisis high inflation was followed low growth rate. This seems quite contrary to Phillips trade-off.

We also carried out some basic regression analysis and found that the growth of reserve money does impact significantly the growth of money supply (M1 and M3). We also found that money supply affects both GDP growth rate and inflation in the country which means monetary policy in India does have a role to play. Obviously there are other dynamic interactions among other variables which are yet to be explored. But one thing that looks clear is that in the post-MIA, the economy has relatively stabilized compared to pre-MIA (Figure 2.1).

Figure 2.1: RBI Policy (Call Money Rate) and outcomes (inflation and GDP growth)
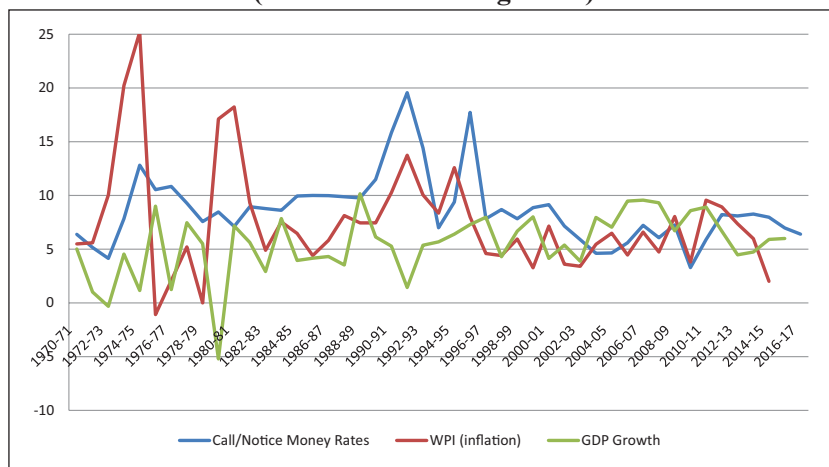
Source: Authors' calculations.

From Figure 2.1. it is quite evident that inflation in the pre-MIA was very high and volatile while in the post-MIA, it has reduced and stabilized to a large extent. The call money rate which actually describes the stance of monetary policy was much higher in the pre-MIA. This shows that monetary policy was more contractionary before 1998 but in post-MIA, call rate has come down drastically. Also, the growth rate in pre-MIA was much lower compared to the post-MIA period. These changes reflect relatively better macroeconomic conditions and increasing importance of monetary policy in India. The decadal average inflation and falling standard deviation of inflation in Figure 2.2. reflects that monetary policy to a large extent has been effective in reducing inflation volatility

Figure 2.2: Decadal average inflation and standard deviation
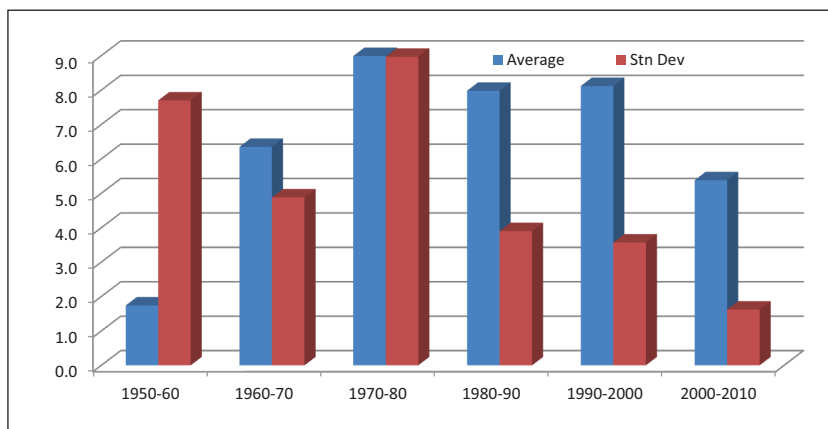
Source: Authors' calculations.

Rate of inflation till 2000 was relatively high but has declined in the recent decade while the inflation volatility has declined from 1980s onwards. Although the rate of inflation after 2010 increased due to GFC but inflation volatility reduced to a large extent in the recent past. There are increasing concerns that conventional monetary policy faced with high inflation and faltering real GDP growth may have limited scope to deal with capital flow volatility.

Conclusion

For the first two decades after independence, the focus of the monetary authority was more on regulating credit in the economy rather than maintaining price stability. Monetary policy was acting more as a credit regulating body and less as an independent authority as enunciated by the RBI act 1934. With increasing government deficits and rising inflation, the focus of monetary authority shifted to monetary targeting but there was no explicit target. Although monetary authority tried to control monetary expansion by restricting the money multiplier, it was not very successful in doing so. In the mid-1980s, after the recommendations of Chakravarty committee report (RBI, 1985) the monetary authority shifted to flexible monetary targeting with M_3 as an intermediate target, reserves money as the operating target and bank reserves as the operating instrument. The main aim was to develop coordination between the monetary authority and the government to contain fiscal deficit and its automatic monetisation which would lead to economic stability. But the assumption of stable money demand on which monetary targeting relies came under sharp criticism due to financial innovation in the post-reform period. This led to the abandonment of MTA and a shift towards MIA- a shift from explicit to implicit target and from quantity-based to price-based signals. There was a change in the operating procedure from direct instruments (interest rate, SLR, CRR) to indirect instruments (repo and OMO). To streamline the monetary policy working, the RBI adopted LAF to manage day-to-day liquidity and to shift policy focus from long-term interest rate to the short-term interest rate. But still due to multiplicity of objectives under MIA, it was not clear as to what RBI was reacting to and seeking to achieve when it changed its policy. Thus, a straight-forward transparent policy which guarantees credibility as well as accountability was the center of attention and inflation targeting was apt. Following Urjit Patel Committee Report (RBI 2014), RBI shifted its policy approach to flexible inflation targeting with an inflation target of 4 per cent and a margin of 2 per cent on each side. The primary focus

is to stabilize prices by anchoring inflation expectation and then focus on output growth in the economy.

We examined different economic indicators across different economic periods based on structural break analysis since 1970s. We broadly found that RBI credit to government has sharply declined in the recent period while fiscal deficit as a per centage of GDP has not showed much decline. Although fiscal deficit has reduced from 6.38 per cent of GDP during 1985-86 to 1997-98 to 4.82 per cent during 1998-99 to 2015-16, it is still high according to FRBM Act 2003. The growth rate of money supply along with reserve money has remained high through out the period.

In the initial or pre-reform period a significant contribution to the increase in money supply may be due to RBI credit to government while in post-reform period, it was mainly due to increased foreign reserves.

Over the periods, growth rate of GDP has increased while inflation rate has shown a decline. But in the recent phase after GFC (2008-09 to 2015-16), the output growth rate was just 6.69 per cent while inflation spiked to 9.51 per cent. Despite the fact that inflation and output volatility along with call money rate has to a large extent stabilized in post-MIA period compared to pre-MIA period, there are increasing concerns for conventional monetary policy due to increasing capital flow volatility.

Over the years monetary policy has been more geared to controlling inflation and with the adoption of the ITA control of inflation becomes the primary objective of the RBI. Also there has been a shift from quantities such as the quantity of money as the intermediate target to price based signals, particularly the overnight rate. Bank reserves have been the main instrument. But instead of variations in the CRR and SLR it is net borrowing from the RBI through repo and reverse repo transactions that affects reserves. But often reserve money changes are driven more by the balance of payments position and the RBI does not always seem to sterilize these.

The changes in operating procedures seem to have anchored expectations better. The volatility in the growth rate of GDP and in inflation has decreased. The recent move to inflation targeting is expected to further improve stablization expectations and encourage investment and growth. But the change has been to recent to permits it evaluation.

Endnotes

[1] The insight of Kalecki that as long as the government did not have complete control over workers' consumption or of consumption of the upper income classes material balance needed to be matched by ensuring monetary balance was ignored.

[2] At the time of the drawing of the Plan there was usually a vigorous debate on the safe limit for deficit financing.

[3] The development strategy in the Second and Third Plans was that the government would invest to produce these basic goods and the government itself would demand the output of these industries for further investment (The Mahalanobis strategy). See Bhagwati and Chakravarty ,1969, Chakravarty, 1969. Public sector investment was financed mainly by foreign aid (Lele and Agarwal, 1990). When aid was cut off in the mid-1960s, government investment fell off and there was excess capacity in these industries.

[4] The SLR could be held in the form of gold or government approved Banks held hardly any gold. Government approved securities were government securities.

[5] The name of the committee was Committee to Review the Working of the Monetary System. It was headed by Prof Sukhamoy Chakravarty.

[6] Since India was a predominantly agricultural economy and inflation was often fueled by supplies of agricultural supplies, it was believed that excessive availability of credit was used to finance holding of excess stocks. So in those conditions credit was restricted to force disgorging of stocks.

[7] This corridor has two interest rates- the bank rate as the upper bound and the reverse repo rate as the lower bound and the call money rate was supposed to vary in between these two rates.

[8] The repo rate is the rate at which the central bank lends money to the scheduled commercial banks while the commercial banks park their surplus fund with the central bank at reverse repo rate and the difference between the repo and the reverse repo rate is the profit margin of Central Bank.

[9] The MSF was introduced to have a wide corridor with a fixed width of 200 bps. In this wide corridor the repo rate stands in the middle as the main policy variable while MSF acts as an upper bound above the repo rate by 100 bps and the reverse repo rate below repo rate by 100 bps.

10 ITA is a policy under which the monetary authority of a country announces its inflation target/range, preferably low, and then adjusts its money supply if the inflation rate deviates from that target/range.

11 If the central bank deviates from the target it has promised, it has to be accountable for it and in some countries like UK, the Bank of England has to give an open letter explaining why it deviated from the target.

12   Core inflation is the inflation that arises from the demand side factors where in volatile supply side factors such as Fuel and Food inflation are excluded.

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