

Inflation Targeting As A Monetary Policy Framework: Insights From India

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abstract

Inflation targeting as a framework for monetary policy was implemented in India in 2016. Prior to its adoption, apprehension was expressed by economists regarding its suitability for India. This research paper examines the performance of key macroeconomic factors including inflation, repo rate, GDP growth and exchange rate, post introduction of the inflation targeting regime in India. The study also throws light on other pertinent aspects such as inflation expectations, food price inflation, impact on the financial sector and the stance of the Reserve Bank of India during this time. To a large extent, the rate of inflation has been within the official target range. The volatility of the exchange rate has declined during the inflation targeting years. The repo rate is lower compared to the pre-inflation targeting era. Further, the transmission from the policy repo rate to the financial markets is better to some extent. However, the transmission to the lending rates in the banking sector has not improved. The study also reveals that the stock market has become less volatile. Regarding the long-term inflation expectations, the expectations held reasonably firm despite significant disruptions in the global and local supply chains due to Covid-19. The approach of the Reserve Bank of India during the inflation targeting system has been flexible. The central bank has given due consideration to output growth and stability, along with the main goal of maintaining low and stable inflation.

Keywords: Inflation targeting, Economic growth, Repo rate, Exchange rate, Financial markets

INTRODUCTION

In the past, various monetary policy frameworks have been adopted by countries to accomplish macroeconomic objectives such as low inflation, steady economic growth, stable exchange rates, low unemployment and sound financial flows. In the recent decades, inflation targeting has been widely approved by central banks. Developed countries like New Zealand, UK and Canada began adopting the inflation targeting method in the 1990s. The move was prompted by unsatisfactory experience involving frameworks such as setting of monetary targets and the fixed exchange rate regime. Inflation as target was initially implemented in New Zealand and Canada. The experience of these countries in successfully taming inflation was followed by adoption of similar practices by other developed nations such as UK, Sweden and Australia. It was noted in these countries that inflation was the principal goal of the monetary policy framework and was given precedence over other macroeconomic indicators such as exchange rate or employment. Inflation targeting is adopted by the monetary authorities to restrict inflation to a certain level or a predetermined range. The basis of the framework is that the level of inflation can be stabilized if inflationary expectations are well anchored.

In certain developed nations, the inflation targeting regime proved effective in maintaining stable domestic price levels. As a result, some developing nations also introduced the framework to guide their monetary policies. South Africa and Thailand (2000), Philippines (2002), Indonesia (2005), Russia (2015) and India (2016) are some of those nations. The only/ primary goal of this framework is low/ moderate inflation. Monetary policy must be unaffected by fiscal pressures and an effective monetary transmission mechanism¹ should exist in the economy to ensure a robust inflation targeting framework. Developing economies might find it challenging to meet these requirements. As a result, the experience of these nations might vary with regards to effectiveness of the inflation targeting policy. The goal of flexible inflation targeting is to stabilize inflation, also taking into account economic growth. In contrast, strict inflation targeting lays no emphasis on output stabilisation and exclusively targets inflation stability.

The efficiency of monetary authorities in restricting inflation has always been a concern in the economies that are in the developing stage, including India. However, Reserve Bank of India, while planning and

¹ India's monetary policy transmission is presented in Appendix 1 (Figure 5).

executing inflation targeting in India also caters to the objective of economic growth, and other macroeconomic conditions such as exchange rate stability. There has been rapid growth of money supply in India in the last few decades. The monetary policy had come under scrutiny due to the augmented inflationary pressures in India. Thus, taking into perspective easing of the inflationary pressures and successful experience of other nations with the inflation targeting system, India adopted the framework in 2016.

India's inflation targeting system includes an inflation target range of 4% +/- 2 percentage points. This has been extended till March 31, 2026 from the original notified time period. Repo rate² is the primary tool of monetary policy employed by the Reserve Bank of India. Changes in repo rate generate impulses that affect investment and consumption, which subsequently influence aggregate demand, output and inflation.

This study assesses the magnitude and volatility of some prime macroeconomic variables (level of inflation, exchange rate, policy repo rate and others) during the inflation targeting period in India. Also evaluated are other important aspects such as anchoring inflation expectations, effect on the financial markets and the banking sector, and food price inflation.

LITERATURE REVIEW

Detailed below is the examination of the relevant studies along with their significant findings.

Inflation, Output growth and Monetary Policy

The monetary policy shocks and their effect on factors like inflation, money supply and output were analysed [2]. The study suggests that monetary policy tools better explain changes in inflation, rather than growth in the output. Therefore, rather than spurring an increase in domestic output, monetary policy is successful in stabilizing the domestic prices. The monetary policy is studied towards twin objectives of inflation control and sustainable economic growth [3]. The research study states that the monetary policy is assessed for using interest rate as a tool to accomplish its objectives. Economic growth is the primary factor influencing the interest rate policy of Reserve Bank of India, according to the results obtained from the research performed. Inflation control and management too is an important objective, but relatively less significant vis-à-vis the economic growth criteria.

The robustness of monetary transmission in India was investigated [5]. The research paper studies the influence of monetary policy on inflation and output. The paper also succinctly covers the inflation targeting regime, as well as its effect on inflation and the domestic output. The research asserts some important conclusions. With regards to the domestic output, the study concludes that movements in the policy rate influence the output significantly. When the policy rate is changed, the output varies as a result after two quarters. After approximately three quarters, the rate of inflation responds fully to the adjustments in the policy repo rate. The study draws the conclusion that both the short-term and the medium-term rates of inflation are significantly influenced by monetary policy.

The policy repo rate and monetary transmission were examined in Indian context [19]. The policy repo rate is established with the primary aim of ensuring price stability. However, it is also influenced by the objective of promoting economic growth. When determining the policy repo rate, any changes made create ripple effects that impact financial markets and the banking sector. These changes subsequently influence interest sensitive spending within the economy, ultimately boosting aggregate demand and contributing to output growth.

The influence of monetary policy on output levels and inflation rates was explored [7]. The study concludes that inflation targeting in India has had a favourable impact in controlling the inflation volatility. Further, the influence of monetary policy changes has waned on inflation, whereas it has become more prominent on the domestic output.

The relationship between the interest rate, exchange rate and inflation was established in the wake of inflation targeting in India [8]. The short-run relationship between real interest rate, consumer price index inflation and real exchange rate is significant, as per findings of the study. Elucidating in quantitative terms, a point percent jump in real interest rate causes decline in inflation by 0.66 percent. However, the results regarding the long-run inter-relationship amongst the variables are inconclusive. The research study supports India adopting the inflation targeting method. The inference is drawn from

² Key policy rate of Reserve Bank of India.

inflation responding well in the short term to alteration in the interest rate by monetary authority. The robustness of monetary transmission was explored in Indian context [1]. The study finds that adjustments to policy rate minimally affect lending rates in banking sector. Additionally, the country's financial markets remain relatively underdeveloped.

Important determinants of inflation were examined [16]. According to the research paper, the inflationary scenario in India does not support interest rates as a control tool. Regarding the interaction between inflation and economic growth, there is a threshold point beyond which inflation inhibits economic growth. Similar circumstances have been experienced in India, involving high inflation rate and slow economic growth. Therefore, it is essential that central bank implements framework for managing inflation and promoting economic growth. The paper examines the determinants of inflation in India [17]. According to the empirical analysis in the study, factors influencing inflation (listed in descending order of significance) are exchange rate, output gap and interest rates. This carries significant policy implications in the context of Reserve Bank of India's consent to flexible inflation targeting.

The inter-relationships between the macroeconomic goal variables such as interest rate, price level and money supply were examined in Indian context [4]. The findings conclude causal relationship exists between money supply and price level. Further, the study concludes that money supply affects the output through the nominal rate of interest. The findings in the research paper support the move to inflation targeting in India. The influence of money supply on domestic output and the level of inflation was studied [6]. Broad money has considerable and positive impact on production and wholesale prices, as revealed by the empirical results. The level of money supply can influence domestic output in a more effective manner when it targets index of industrial production directly, vis-à-vis through the inflation channel, is another important observation of the study.

The impact of India's adoption of inflation targeting in 2016 on inflation expectations in the private sector is explored [18]. The research undertaken evaluates the effect of the actual inflation on inflation expectations. The results obtained indicate that long-run inflation expectations became less sensitive to the actual rate of inflation post-2016. Thus, inflation targeting may have contributed to anchoring these expectations in line with the target set by Reserve Bank of India. The effect of the monetary policy during the inflation targeting system was empirically investigated in the Indian context [21]. The research results attained demonstrate that even for a brief time span, inflation targeting was effective.

A research study was undertaken in Turkey to examine the factors that influence inflation and effectiveness of monetary transmission [10]. A full-fledged inflation targeting system has been in effect in Turkey since 2006. The study concludes that the main causes of inflation include the interest rate, GDP growth rate and exchange rate adjustments. It has also been investigated if pure inflation targeting nations perform as well as those nations that assign importance to both inflation and output stabilization [11]. The research paper draws the conclusion that this might hold true. The inflation targeting regime in Thailand is evaluated since 2000 with regard to execution, management and performance [12]. It is concluded that monetary policy shocks have minimal effect on inflation, possibly due to slow rate of adjustment in policy rate towards the target policy rate.

The outcome³ of modification in the monetary policy is investigated for South Africa [13]. The research indicates that the response of macroeconomic variables is marginally more during inflation targeting compared to the period before. This change is statistically negligible. The response of domestic output and price level to revision in the monetary policy was evaluated for Vietnam [14]. The research undertaken reveals that contractionary monetary policy action to increase the interest rate is efficient in controlling prices in the economy. Further, there is significant effect of increase in broad money on the domestic industrial production. A study was conducted for ASEAN-5 economies, covering economies with and without the inflation targeting regime [15]. It is observed that output growth and money supply have some impact on inflation, though the results varied among countries.

The causality effects of the inflation targeting policy on economic performance were examined for emerging market economies [20]. The paper examined inflation and output growth. The findings indicate that inflation targeting is effective in managing inflation when exogenous shock occurs, without adversely impacting the output.

Financial markets and Investment

³ In relation to key macroeconomic indicators.

An interim assessment of inflation targeting in India was done [24]. The research conducted examines the strength of transmission from the policy repo rate to the financial markets and banks, volatility of the stock market and the effect on the portfolio flows. Also studied is the impact on the foreign reserves, volatility of the exchange rate and anchoring the inflation expectations. The research paper concludes that reductions in the volatility of the stock market, the call money rate and the exchange rates, and the absence of effects on the portfolio flows and foreign reserves are all positive signs regarding the inflation targeting system.

The response of households' investments and consumption to changes in inflation expectations is examined during the inflation targeting period in India [23]. The research study reveals that decline in inflation expectations leads to households with high liquid wealth realigning their portfolio from high-risk to deposits in banks. This section of the households increased its savings during such economic circumstances and lowered its consumption spending. However, the savings dropped (and consumption grew) of the households with less liquid wealth.

The potential spillover effects on the financial stability of the emerging economies, following execution of the inflation targeting system, are investigated [22]. The adoption of the inflation targeting regime has been found to have notable beneficial spillover effects on the stability of the banking system and the foreign capital inflows. This has resulted from the central banks' increased accountability and transparency. The research further suggests that, the emerging nations presently operating under the inflation targeting lite regime, shift to a more comprehensive version of the framework.

Exchange rate

The influence of exchange rate shocks on India's inflation, short-term and long-term, was observed [25]. The research concluded that exchange rate shocks had a considerable impact on domestic inflation, for the period April 1994 to February 2018. Consumer Price Index (average household's cost of services and goods consumed) and Indian Rupee /U.S. Dollar bilateral exchange rate (monthly average) were used. The macroeconomic variables affecting inflation in India were examined [26]. Fiscal variable and trade openness factor are also considered in the research. The research paper indicates that there is considerable impact of real effective exchange rate (along with money growth) on the inflationary pressures in India. Important macroeconomic factors determining inflation in India were studied [27]. The cointegration approach (auto regressive distributed lag model) used in the research paper draws conclusion with regard to the long-run association between rate of inflation, exchange rate, output gap and crude oil prices. According to the paper, a significant role is played by exchange rate and crude oil prices in determining the prices in the domestic economy.

For an economy comprising of two sectors, the coordination of exchange rate and monetary policy was investigated [28]. The research concluded that inflation targeting is significantly more effective when the exchange rate is scrupulously managed. In a system with flexible exchange rates, inflation targeting carries significant risks of uncertainty. Additionally, small inflation shocks may snowball into considerably bigger inflationary scenarios. However, if the central bank closely monitors and manages the nominal exchange rate, such precarious economic conditions can be avoided. Similar opinion is expressed in another research paper. Numerous research studies highlight the concerns of monetary authorities in transitioning to the inflation targeting regime, as it is accompanied with floating exchange rate [29]. However, central banks may intervene to promote exchange rate and financial stability.

REPO RATE, RATE OF INFLATION AND ECONOMIC GROWTH

This section examines the movement of and the inter-relationship among these key indicators post introduction of inflation targeting in India.

Repo rate

The repo rate acts as a reference point for interest rates within the Indian economy. It is the interest rate at which banks borrow from the Reserve Bank of India. Changes in the repo rate trigger modifications in the interest rates in the financial markets and the banking sector, eventually impacting interest sensitive spending, aggregate demand and output [19].

The role of repo rate is vital in the inflation targeting policy implemented in India. It impacts the macroeconomic goals of price stability and economic growth as a result of the monetary transmission process (Appendix 1, Figure 5). However, for emerging market economies such as India, it is opined that lags and rigidities hinder the extent and pace of monetary transmission. This could reduce the efficacy of the monetary policy that depends on the working of the policy repo rate and the subsequent

transmission.

The repo rate in India since 2008 is displayed in Figure 1 below.

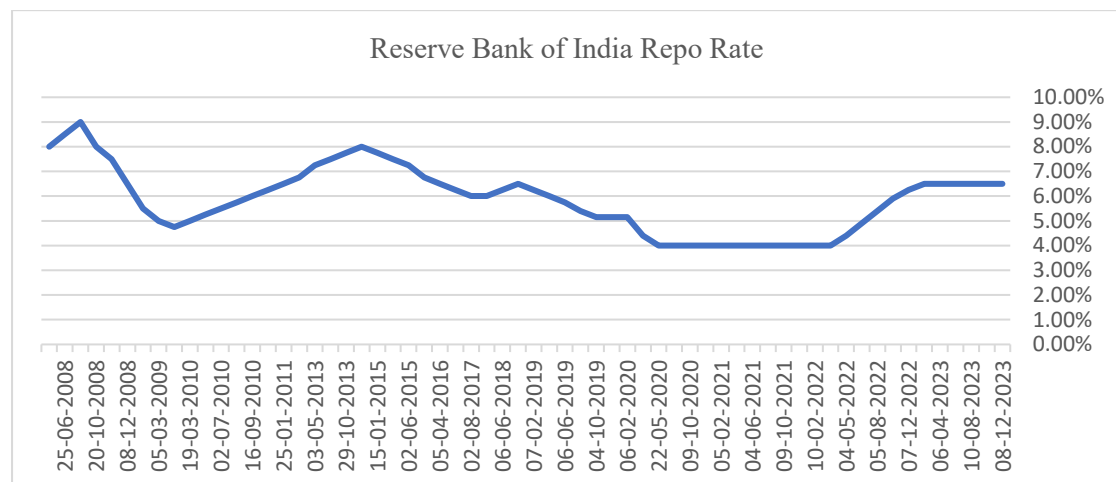


Figure 1. Reserve Bank of India Repo Rate (2008 - 2023)

Source: Reserve Bank of India

Subsequent to execution of inflation targeting, repo rate is relatively lower and less volatile (including the Covid-19 period). Thus, in the Indian context, the policy repo rate has been effective in maintaining the inflation rate within/close to the tolerance band⁴ (Figure 2) without much manoeuvre. Other research work too supports India adopting the inflation targeting system [8]. It draws this conclusion as a result of inflation responding well in short run to movements in the interest rate by the monetary authority.

Inflation

Figure 2 below exhibits the trajectory of inflation in India before and after introduction of inflation targeting. Since implementation of inflation targeting, inflation has mostly been within the range⁵ established officially. The rate of inflation is lower and less volatile. Expectations of the public regarding inflation have shifted in accordance with the actual rate.

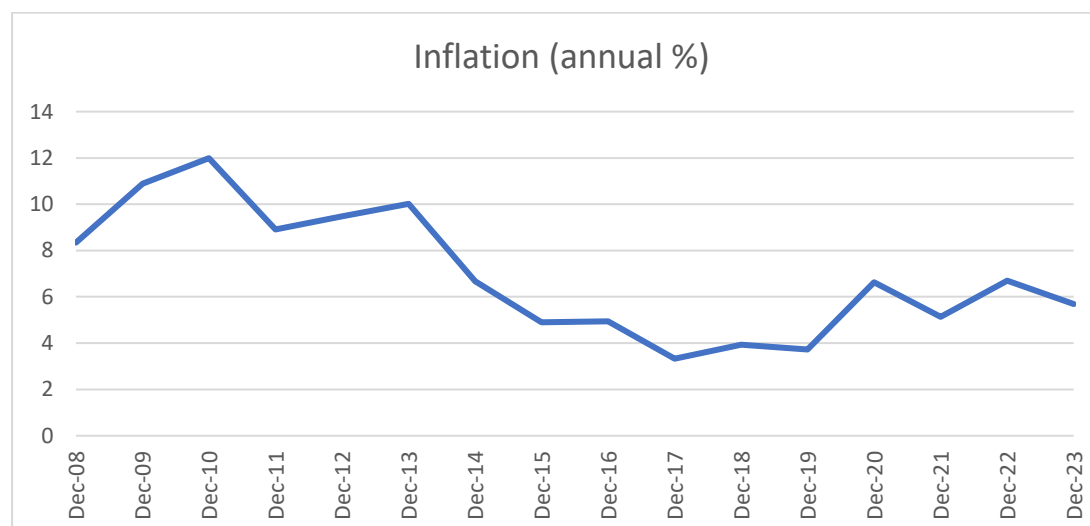


Figure 2. The trajectory of inflation in India (2008 - 2023)

Source: World Bank and Forbes India

⁴ 2% - 6%

⁵ Sustaining credibility lies in responding promptly and transparently to any divergence, with the aim of restoring inflation within the specified range.

Note: The inflation rate of 5.69% for the year 2023 is for the month of December 2023.

Better Anchoring

Anchoring inflation expectations is an important mechanism by which inflation targeting influences macroeconomic outcomes. In other words, economic shocks do not cause agents' long-run inflation expectations to destabilize in an effective inflation targeting system. The agents opine that in response to these shocks, the central bank will implement appropriate policies to maintain inflation at target levels. Therefore, the degree to which inflation expectations have become anchored may serve as an indicator regarding the efficacy of inflation targeting regime.

Inflation has become better anchored⁶ since introduction of inflation targeting in India [18]. This suggests enhancement in anti-inflation credibility.

Covid-19 crisis

The stance of the monetary policy during the Covid-19 crisis is presented in Box 1 below.

Box 1. Monetary Policy Statement during Covid-19 crisis

Monetary Policy Statement, 2021-22 Resolution of the Monetary Policy Committee (MPC) October 6-8, 2021

The MPC has opted to maintain an accommodative stance for as long as needed to promote and sustain long-term growth, while also addressing the ongoing economic effects of COVID-19 and ensuring that inflation stays within the target range.

Source: Reserve Bank of India

During extraordinary circumstances such as the Covid-19 pandemic, Reserve bank of India was able to respond forcefully to inflationary and growth challenges. According to [17], supply side factors contribute significantly to determining headline inflation. During the Covid-19 period of negative supply shocks, inflation was close to/ within the official target range. Thus, under the inflation targeting regime, Reserve Bank of India had more policy room for maneuver and was able to implement exceptional measures in response to Covid-19.

Food prices

It has been observed that rising food prices can extend their impact to core inflation rates and take a toll on expectations. Further, in India, food prices represent a significantly higher portion of consumption baskets compared to many other countries. Thus, the monetary policy should also focus on this component of CPI⁷ inflation rather than neglecting it. However, the discussions by economists on this front have remained inconclusive.

According to the Economic Survey released in July 2024, targeting inflation excluding food should be considered in India [30]. The rationale given in this regard is that rise in food prices is usually driven by supply factors. On the other hand, monetary policy measures address price pressures stemming from steep growth in aggregate demand. Using these instruments to manage inflation caused by supply constraints could be counterproductive.

Monetary Policy Committee's meeting in August 2024, however, communicated the need to retain food prices within the central bank's broader inflation target.

Volatility

Table 1 below offers a comparative analysis regarding the volatility of inflation in India, for the years preceding and post execution of inflation targeting in India.

Table 1. Inflation under Inflation Targeting (IT) and Pre-IT - Volatility (Per cent)

	CPI-C* Inflation Volatility
Pre-IT	
2012-13	0.5
2013-14	1.3

⁶ Increases in actual inflation trigger inflation expectations less.

⁷ Consumer Price Index

2014-15	1.5
2015-16	0.7
Average	2.4
IT	
2016-17	1.0
2017-18	1.2
2018-19	1.1
2019-20	1.8
Average	1.4

Source: Reserve Bank of India

*C-Combined

Note: Volatility is measured by standard deviation of monthly y-o-y inflation. Average volatility indicates standard deviation of the variable for the relevant full period.

Source: Reserve Bank of India

The table indicates that mean volatility of inflation (CPI-C) for the period 2016 – 2020 (inflation targeting years) has fallen to 1.4% compared to 2.4% for the period 2012 – 2016 (pre-inflation targeting years).

GDP growth

It has been opined that monetary policy tools better explain changes in inflation, rather than growth in the output [2]. Thus, at the time of implementation of inflation targeting in India, there was scepticism that emphasis on taming inflation could put growth on the back burner. An approach that also supports output stability would yield better results and be sustainable⁸.

The stance of Reserve Bank of India during inflation targeting is “*inflation progressively aligns with the target, while supporting growth*”. Thus, Reserve Bank of India can be described as flexible inflation targeter. It takes into account output gap when deciding on the repo rates. The coefficients in the policy reaction function highlight policymakers' preference regarding the trade-off between output and inflation. More weightage on current inflation divergence from target is indicative of a quicker return to the target rate following a supply shock, which may lead to a more pronounced increase in the output gap.

The interaction between inflation and economic growth was examined [16]. According to the research paper, there is a threshold point beyond which inflation hinders economic growth. Similar macroeconomic conditions have been observed in India, involving high rate of inflation and slow economic growth. Research analysis is undertaken to determine the influence of inflation variance on economic growth [21]. The findings show that small variance in inflation leads to higher variance in growth in the opposite direction.

Figure 3 below displays the growth rate of GDP in India since 2008.

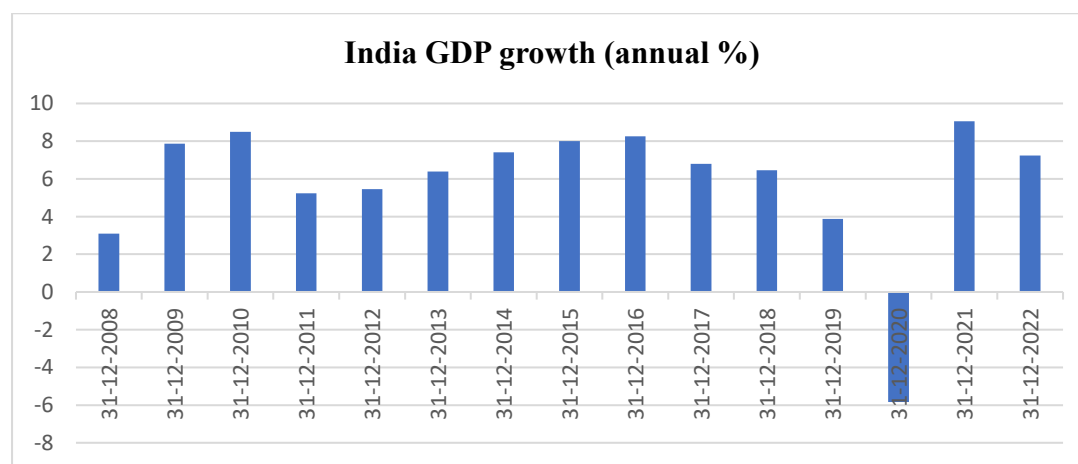


Figure 3. India GDP growth rate (2008 – 2023)

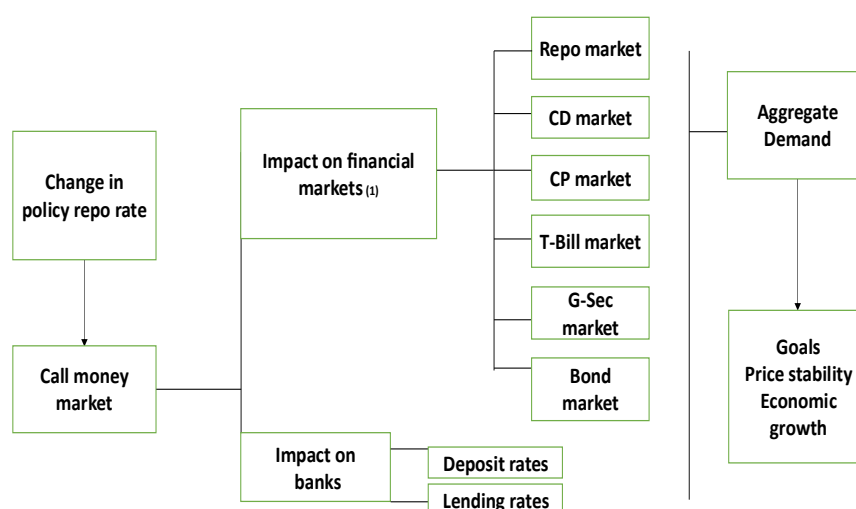
Source: World Bank national accounts data

⁸ It was also opined that Reserve Bank of India should exercise caution regarding exchange rate management and financial stability.

As per the figure, the Indian economy slowed down during the years 2017-2019. These were also the initial years of inflation targeting in India. The GDP growth rate took a hit in 2020 due to the Covid-19 crisis. However, the economy bounced back in the subsequent years. It might be early to comment regarding how inflation targeting affected GDP growth as several factors influence the variable, not to forget the extraordinary economic conditions created as a result of the Covid-19 crisis. However, there haven't been signs of the new monetary framework unduly stifling the economy or the Reserve Bank of India inordinately focusing on inflation, as was opined before.

FINANCIAL MARKETS AND INVESTMENT

As mentioned above, under inflation targeting in India, policy repo rate is established taking into consideration the target inflation rate and the primary aim of maintaining price stability (in conjunction



with the pursuit of economic growth). The change in the policy repo rate affects the financial sector via monetary transmission. As exhibited in Figure 4 below, the call money market (WACR⁹) is impacted first. This is followed by the transmission to all the other money market rates and bond market rates¹⁰. The rate at which banks lend (represented by MCLR) also changes.

Figure 4. Transmission of impulses from repo rate change to the financial market

Note: Adapted from “Monetary policy framework in India” by Dua (2020), *Indian Econ Rev.*, 55(1), 117-154.

1. Money and bond markets
2. CD - Certificate of deposit
3. CP - Commercial paper
4. T-Bill - Treasury bill
5. G-Sec - Government securities

With reference to transmission of impulses due to changes in the policy to the financial sector, notable evidence was shared during the India Policy Forum 2020 [24]. Monthly data was collated for the treasury bill rates, government bonds yields and the average lending rates on loans¹¹. They concluded that, after execution of inflation targeting system in India, the transmission to the bill rates and the government bonds yields is better to some extent. However, transmission to the bank lending rates has not improved and is weak. The analysis also revealed that the call money rate and the stock market became less volatile.

⁹ Weighted average call money rate

¹⁰ Including the CD market, Repo market, CP market and others.

¹¹ Outstanding and new loans

The volatility of the portfolio flows was also calculated and analysed. It is measured as deviation of the flows¹² from the average. It was noted that the fluctuation in the portfolio flows remained unchanged with transition to the inflation targeting system, in comparison to the fluctuations during the post-GFC (Global Financial Crisis) period.

With reference to the households' investment portfolio in India during inflation targeting period, the impact of changes in the inflation expectations on the portfolio was examined [23]. It was observed that changes in the inflation expectations affect the households' portfolio. With decline in the inflation expectations, households with high liquid wealth rebalance their investment portfolio from high-risk to deposits in banks.

EXCHANGE RATE

As mentioned above, a crucial factor in determining the level of inflation in economy is the exchange rate [25] & [26]. Further, risks associated with floating exchanges rates in inflation targeting¹³, can be minimized by close monitoring of the exchange rate. The Reserve Bank of India intervenes in the foreign exchange market to manage excess volatility and maintain orderly conditions with regard to stability and level of the nominal exchange rate.

Table 2 below offers a comparative analysis regarding the exchange rate's level and fluctuation in India, for the years preceding and post introduction of inflation targeting in India.

Table 2. Exchange rate under Inflation Targeting (IT) and Pre-IT - Level and Volatility (Per cent)

	App (+)/ Dep (-) of Exchange rate	Exchange rate volatility
Pre-IT		
2012-13	-4.3	2.0
2013-14	-2.2	2.2
2014-15	5.5	0.9
2015-16	2.9	1.3
Average	0.5	1.6
IT		
2016-17	2.2	0.7
2017-18	4.5	1.3
2018-19	-4.8	1.9
2019-20	2.4	1.2
Average	1.1	1.3

Note: Volatility is measured by deviation of appreciation/ depreciation of exchange rate from the average.

Source: Reserve Bank of India

The table reveals that the appreciation (average) in exchange rate during inflation targeting years is more (1.1%) in comparison to the years before inflation targeting (0.5%). Further, the volatility of the exchange rate has decreased, falling from 1.6% in the pre-inflation targeting period to 1.3% during inflation targeting era.

CONCLUSION

It's not been too long since execution of inflation targeting in the Indian economy. Nonetheless there have been certain indications regarding the framework's performance in India. The rate of inflation has been tamed to a large extent in line with the official target range. Covid-19 pandemic proved to be a significant challenge with considerable negative supply shocks. Despite such economic upheaval, the monetary policy relying on the system of inflation targeting, fared fairly well. The long-term inflation expectations held reasonably firm in spite of the supply shocks. The food-price inflation, however, should not be neglected as it forms a sizeable component of the headline inflation in India and could de-anchor the long-term inflation expectations.

¹² In USD billions

¹³ Especially in the emerging market economies such as India.

It has not been observed that Reserve bank of India has taken a hawkish stance during inflation targeting in India. The repo rate¹⁴ is lower when compared with period before inflation targeting. The approach of Reserve Bank of India is that of flexible inflation targeter, not neglecting output stability while setting the repo rate for inflation. Further, the shift to inflation targeting bolstered the credibility of monetary policy, allowing the Reserve Bank of India to implement exceptional measures in order to respond to Covid-19 crisis. Regarding financial markets, the volatility in the stock market has declined and no change has been recorded in the volatility of the portfolio flows. The transmission to the financial markets, from the policy repo rate, has somewhat improved.

Appendix 1

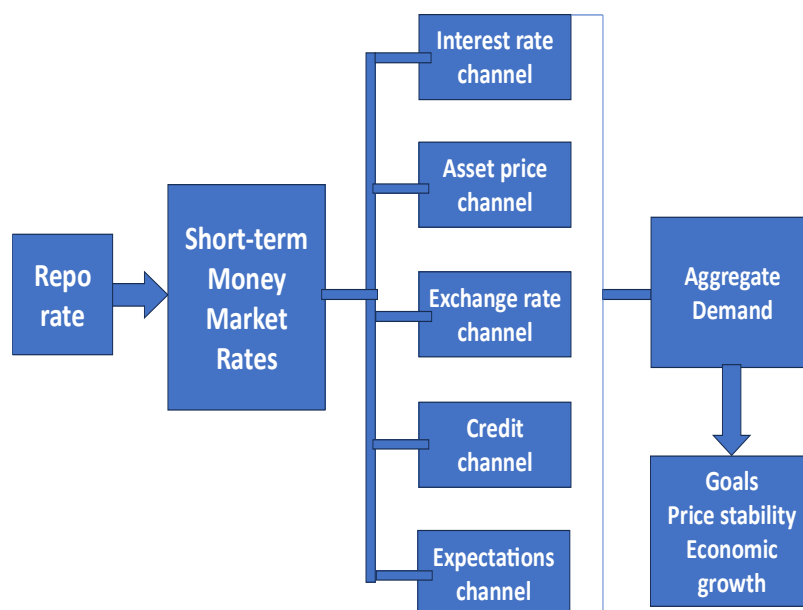


Figure 5. Monetary Policy Transmission

Note: Adapted from “Monetary policy framework in India” by Dua (2020), *Indian Econ Rev.*, 55(1), 117-154.

Note: Aggregate Demand = Consumption + Investment + Net Exports. Consumption includes private and government consumption.

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¹⁴ Average

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