

The Journey of Inflation Targeting in India

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Abstract

It has been eight years since India adopted the inflation targeting (IT) framework for its monetary policy. In this paper we present a comprehensive analysis of the IT regime, addressing several critical aspects. We evaluate the performance of inflation over this period, and review the conduct of monetary policy during and after the Covid- 19 pandemic. We also identify key challenges that persist particularly in context of the Impossible Trilemma and highlight issues that may require further examination in order to improve the effectiveness of the IT framework in the future.

Keywords: Inflation Targeting, Reserve Bank of India, Monetary Policy Committee, CPI Inflation, Impossible Trilemma

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1. Introduction

In 2016, India made a significant advancement in its monetary policy framework by adopting an inflation targeting (IT) regime. Since the early 1990s, IT has been the predominant monetary policy approach among major developed and emerging economies in the post-World War II global economy. This framework entails setting an official target or target range for inflation over a specified horizon, explicitly prioritizing low and stable inflation as the primary objective of monetary policy, enhancing communication with the public regarding the central bank's plans and goals, and increasing the central bank's accountability in achieving these objectives. Over the past eight years, the implementation of IT has notably streamlined and augmented the accountability of India's monetary policy and arguably bolstered the credibility of the Reserve Bank of India (RBI). In this paper we take a look at how IT has evolved in India since its implementation, highlight some of the challenges that the framework has encountered especially in recent times and also make some recommendations to improve the framework going forward.

The Amendment to the RBI Act (2016) laid the legal foundations for IT in India. With the institutional arrangements that were put in place, IT went from being a desirable objective to becoming a legal mandate. Since then, on a de-jure basis India has been an IT country¹. However, effective and genuine implementation of IT in a de-facto manner requires two more factors. The first is about moving away from a pegged exchange rate to a floating exchange rate. The second is to establish a separate public debt management agency so that the RBI can respond to inflationary pressures by raising interest rates without also being concerned about the resultant rise in the costs of government debt. We find that neither of these two elements has been operational in India during the IT period. This raises questions about the true effectiveness of the IT framework.

While the de-facto working of IT remains doubtful, most of the de-jure mechanisms required to transition to an IT regime, have been put in place. These include, the composition of a Monetary Policy Committee (MPC), a voting process to decide the policy interest rate, provisions to make monetary policy conduct relatively more transparent such as timely and regular publication of monetary policy statements and the minutes of MPC meetings, and accountability mechanisms for deviations from the inflation target. Accordingly our paper is divided into two main parts: In the first part we throw light on some important constraints that are getting imposed on the functioning of the IT framework owing to policy choices made by the RBI as well as some legacy and structural issues and in the second part, we describe in detail various aspects of the conduct of monetary policy during the IT regime.

The principle of allowing the exchange rate to float freely when a country adopts IT is enshrined in the doctrine of the Impossible Trilemma which postulates that a country must choose two out of three policy objectives namely, an open capital account, a fixed exchange rate and an independent monetary policy. Over the last decade, with gradual relaxation of capital controls and adoption of the IT Framework, India seems to be moving towards a combination of open capital account and independent monetary policy. This combination is inconsistent with the pursuit of a fixed or pegged

exchange rate regime. However, we find that the Rupee-Dollar (henceforth INR-USD) exchange rate is actively managed by the RBI through its interventions in currency markets. The intensity of this management got aggravated in 2023 and 2024 (data till September) to the extent that the rupee almost seemed pegged to the dollar. This complicates the functioning of the IT framework because whenever the RBI intervenes in the foreign exchange (henceforth FX) markets, it changes the domestic money supply which in turn is intricately connected to inflation.

Another important pre-requisite for IT to work effectively is for the central bank to be free of public debt management obligations. In the current system the RBI is the agent for government debt management. Debt management conflicts with IT because the objective of the former is to make low-cost debt available to the government whereas the objective of IT is to keep inflation low and stable which in turn often entails higher interest rates and hence increased costs of government borrowing. Yet, even after the adoption of IT in India, and despite repeated committee recommendations that the debt management work be placed in an independent Public Debt Management Agency (PDMA), this has not been done².

We next turn to the conduct of monetary policy as well as performance of inflation under IT. The introduction of IT precipitated notable de-jure transformations in the formal conduct of monetary policy in India. Empirical research indicates that the adoption of IT has streamlined monetary policy communication (Mathur and Sengupta, 2019) in India and has also enhanced market participants' confidence in the RBI's commitment to its inflation target (Garga et al., 2024).

During the IT regime, the Indian economy encountered several significant shocks, including Demonetisation in 2016, the Covid-19 pandemic in 2020 and 2021, and more recently, the intensified geopolitical tensions following the Russian invasion of Ukraine in 2022 and the conflicts in the Middle East. These events likely influenced the inflation trajectory and also the conduct of monetary policy. The Covid-19 pandemic period for example, saw significant deviations from the established IT framework. Traditionally, the repo rate served as the primary tool for IT. However, during FY2021 and FY2022, the RBI faced with unprecedented challenges due to the pandemic, executed a shift wherein the reverse repo rate (i.e., the rate at which banks deposit excess funds with the RBI) effectively became the primary policy instrument. Given that by statute, the MPC is authorized solely to set the repo rate, it can be inferred that during this period, the MPC was not in control of the de-facto monetary policy decisions.

This period also saw the introduction of several unconventional monetary policy measures aimed at injecting liquidity into the financial system and maintaining low government bond yields to reduce borrowing costs (Lakdawala et al., 2023). These measures, which fell outside the MPC's purview, were not reflected in MPC statements but were instead announced separately by the RBI Governor. This approach constituted a further departure from the IT framework.

In the post-Covid period, the IT framework was put to test by a series of external shocks. Under current legislation, the RBI is deemed to have failed in its IT mandate if the headline CPI inflation falls below 2% or exceeds 6% for three consecutive quarters. This scenario materialized for the first

time in calendar year 2022, when CPI inflation surpassed the upper threshold of 6% for three consecutive quarters, from January to September.

A substantial body of literature has evaluated the performance of the IT framework in emerging markets generally, and in India specifically. Research by Schmidt-Hebbel and Carrasco (2016) indicates that IT has contributed to better anchoring of inflation expectations in emerging and developing economies. Specific assessments of the IT regime in India suggest a consensus that its adoption by the RBI has led to lower, less volatile, and more effectively anchored inflation (Patnaik and Pandey, 2020b; Eichengreen et al., 2021; Eichengreen and Gupta, 2024). Regarding the anchoring of households' inflation expectations, Pattanaik et al. (2023) demonstrate significant improvements following the implementation of the IT framework in India. Enhanced anchoring of inflation expectations plays a crucial role in mitigating the risk of a wage-price spiral. Our paper contributes to this literature by providing a comprehensive analysis of various dimensions of India's IT regime. It is also the first paper to highlight the constraints imposed by recent policy choices on the effective functioning of the IT framework.

The remainder of the paper is organized as follows. Section 2 offers a detailed background of India's monetary policy regimes and delineates the fundamental principles of the IT framework. Section 3 discusses critical issues affecting the effective operation of the IT framework, particularly in context of the Impossible Trilemma. Section 4 examines the various facets of MPC meetings over the past eight years, including voting patterns of the members. This section also provides a brief overview of monetary policy conduct during the Covid-19 pandemic. Section 5 presents a brief overview of CPI inflation under the IT framework and Section 6 discusses issues related to monetary policy transmission. Finally, Section 7 concludes with a set of recommendations.

2. Background

India's monetary policy framework has undergone several structural changes over the years reflecting underlying macroeconomic and financial conditions. In the aftermath of the financial liberalisation reforms of the early 1990s, the RBI adopted a "multiple indicator approach" (MIA) in April 1998. Under this approach, a host of variables such as money supply, credit, trade, capital flows, rates of return in different financial markets, inflation and exchange rate were considered while taking monetary policy decisions (Dua, 2020). However, monetary policy was not governed by any explicit or well-defined objective per se.

This approach seemed to work well during the period from 1998 to 2008 — the average GDP growth rate was 7% and the average inflation rate was about 5.5%, both in terms of WPI and CPI. However, since 2007, several expert committees raised concerns with the multiple indicator framework and recommended the need for a clear objective of monetary policy.

2.1 Need for a defined nominal anchor

A credible monetary policy framework relies on a nominal anchor to guide its objectives. A nominal anchor is a variable that stabilises the goal of monetary policy and shapes its trajectory over the medium to long term. Historically, one common nominal anchor employed by central banks was the currency peg (Patnaik and Pandey, 2020a). By adopting this method, a country's monetary policy becomes intertwined with that of the anchor country, with domestic inflation rates aligning with those of the anchor economy over time. The currency peg offers a built-in rule for monetary policy: tightening monetary policy when there is a risk of domestic currency depreciation and easing it when there is a risk of appreciation.

Despite its advantages in terms of clarity and simplicity, exchange rate targeting has significant limitations. One major drawback is the loss of monetary policy independence. When domestic interest rates are closely aligned with exchange rate fluctuations, the ability to use monetary policy to address domestic shocks that are not correlated with those affecting the anchor country, is diminished.

In India until 2008, monetary policy had an occasional nominal anchor: a de-facto peg of the INR to the USD maintained by the RBI's active FX interventions (Shah, 2023; Patnaik and Pandey, 2020a). In the aftermath of the Global Financial Crisis (GFC) of 2008-09, capital outflows from emerging economies like India imposed a significant depreciation pressure on the rupee (Patnaik and Sengupta, 2022). Given the sizeable loss of foreign exchange reserves that was required to stabilise the exchange rate, the RBI pretty much stopped its FX interventions. Monetary policy lost its nominal anchor. During this period, primarily owing to high food prices as well as expansionary monetary and fiscal policies undertaken post-GFC, India also experienced a high inflation phase. From 2009 to 2013, WPI inflation rose to 7%, and CPI inflation increased sharply to more than 10%. Inflation in India was the highest among all G20 countries (RBI, 2014). Household inflation expectations became unhinged from the low and stable inflation experience of the 2000–2007 period and went up dramatically. Professional forecasters' surveys showed that the long-term inflation expectations went up by nearly 150bps during this period. As a result of the heightened macroeconomic volatility, the credibility of the multiple indicator approach was called into question.

Multiple expert committees emphasised that the single objective of monetary policy of the RBI should be inflation control (Mistry, 2007; Rajan, 2009). During the tenure of the RBI Governor Raghuram Rajan, an Expert Committee to Revise and Strengthen the Monetary Policy Framework was established on September 12, 2013 under the chairmanship of deputy governor Urjit Patel to take into considerations all these recommendations. The Expert Committee recommended that inflation become the nominal anchor of monetary policy and that the RBI adopt flexible inflation targeting that would recognize the short-run trade-offs between growth and inflation. Inflation as a nominal anchor is simple and easily communicated to the public at large.

1.2 Inflation targeting regime in India

The RBI accepted the Expert Committee's recommendations. This led to the signing of the Monetary Policy Framework Agreement (MPFA) between the government of India and the RBI on February 20, 2015. With this, IT was formally adopted in India. The Finance Act of 2016 amended the RBI Act (1934) to add price stability as the primary objective of monetary policy, CPI as the nominal anchor, and a Monetary Policy Committee (MPC) to set the policy repo rate to achieve the inflation target.³ This amended Act provided a statutory basis for the implementation of the IT framework in India.

Until then the RBI often used the WPI rather than the CPI as its preferred measure of inflation, because the WPI was available at high frequency and at a more disaggregated level (Patnaik and Pandey, 2020a). In keeping with the recommendations of the Expert Committee Report, the target under IT was redefined in terms of the year-on-year percentage change in headline CPI (including food and fuel prices) inflation, which closely reflects the cost of living of an average Indian household. This is also consistent with the prevalent practice in all other countries with IT central banks.

The amended RBI Act came into effect in June, 2016. In August, 2016, the Government notified a CPI inflation target of 4% within a band of 2% on either side, for the period from August 5, 2016 through March 31, 2021. The amended RBI Act provided that the government shall, in consultation with the RBI, determine the inflation target once every five years. Accordingly, after the scheduled review in 2020, this target was renewed for the next five-year period.

One of the main objectives behind adoption of IT was to establish in a visible and transparent manner that the goal of monetary policy is to ensure that deviations from the target level of inflation on a persistent basis would not be tolerated. This was considered important for stabilising and anchoring inflation expectations of all economic agents, which in turn would influence their behaviour and hence aggregate demand (RBI, 2014). Accordingly, the law outlining the IT framework contains various provisions to ensure accountability, transparency, and predictability of the monetary policy operating procedure. The amended RBI Act provides that the RBI shall be seen to have failed to meet the target if inflation remains above 6% or below 2% for three consecutive quarters. In such circumstances, the RBI is required to inform the government about the reasons for the failure and propose remedial measures and the expected time it will take to return inflation to the target.

In most IT countries, monetary policy decisions are made by a committee. Accordingly, the amended RBI Act provided for the formation of a six-member Monetary Policy Committee (MPC), which is entrusted with the task of determining the policy repo rate required to achieve the inflation target. The MPC is constituted by the government for a period of four years (Patnaik and Pandey, 2020a). It consists of three internal RBI members including the RBI governor, who is the chairperson of the committee, and three external members.

In every MPC meeting, the policy repo rate is decided by a majority of votes by the members present at the meeting. Each MPC member has one vote, and in the event of a tie, the governor has a

casting vote. Further, according to the Act, the RBI must organize at least four meetings of the MPC every year and the meeting schedule for the year must be published on the RBI website at least one week before the year's first meeting. This imparts greater transparency and predictability to monetary policy decisions.

Credibility of the IT framework is crucially contingent on an efficient and transparent communication strategy. The Act requires that resolutions adopted by the MPC must be published on the RBI website after each monetary policy meeting. The RBI must also publish the minutes of the MPC meetings two weeks after every meeting as well as a detailed monetary report twice a year, outlining the sources of inflation and the forecasts for inflation. The implementation of these provisions implies that there has been a marked change in the manner in which monetary policy is conducted in the IT regime compared with the earlier frameworks.

3. Monetary policy challenges in emerging economies

3.1 Navigating the Impossible Trilemma

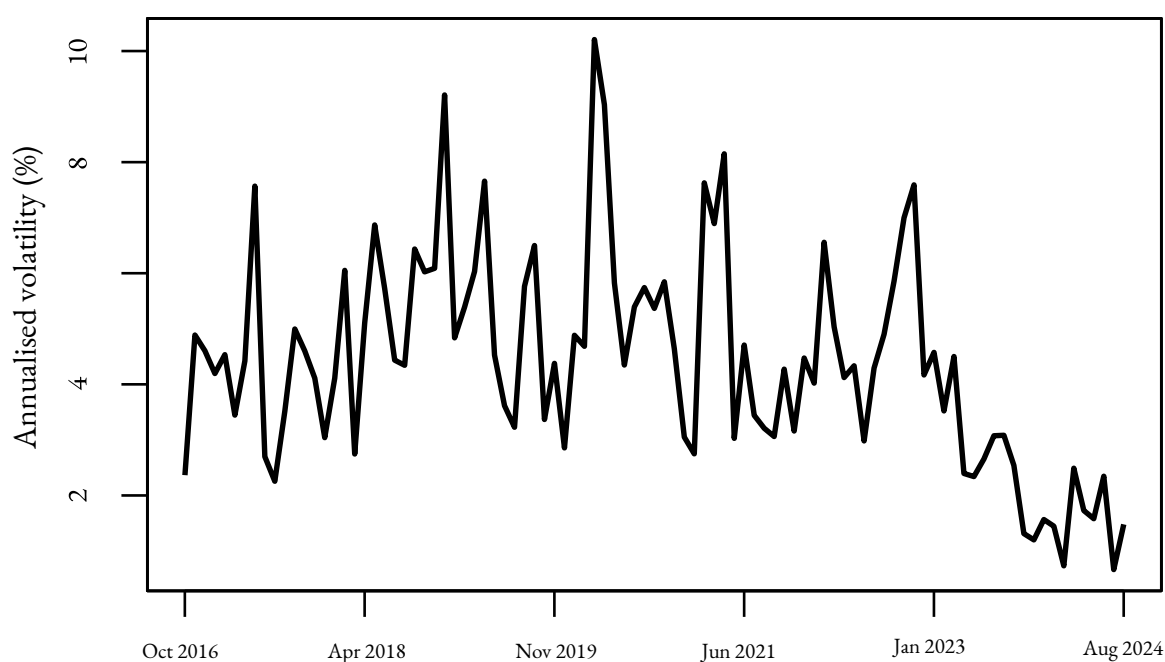
Eight years after the formal adoption of the IT framework, the RBI continues to grapple with the challenges posed by the Impossible Trilemma, which necessitates balancing the trade-offs between an independent monetary policy, a fixed exchange rate, and an open capital account. There exists a large literature analysing the evolution of Trilemma trade-offs for emerging economies. Several studies have also explored the Trilemma in the Indian context.⁴

On one hand, India's capital account has progressively liberalised with gradual relaxation of capital controls on foreign investments, particularly in the aftermath of the Global Financial Crisis (Aggarwal et al., 2022). On the other hand, with IT as the legal mandate since 2015, the RBI needs to exercise monetary policy independence i.e. domestic macroeconomic considerations should play a greater role in guiding the conduct of monetary policy compared to global macro developments especially in developed countries like the US. According to the Trilemma, the pursuit of an independent monetary policy in an economy with an open capital account does not leave any room for exchange rate stabilisation. However, the RBI continues to remain focused on stabilising the INR-USD exchange rate volatility.

There have been times when the RBI may have even used monetary policy to manage ex- change rate fluctuations. For example, in the June and August 2018 meetings the MPC decided to raise the repo rate. These rate increases were likely implemented to mitigate depreciation pressures on the INR-USD exchange rate amidst a brief emerging market crisis triggered by economic instability in Turkey during the summer of 2018. The monetary tightening observed in 2018 was unlikely to have been driven by inflationary concerns, as the average inflation rate from January to August 2018 was a relatively moderate 4.5%. This period illustrates an instance where the MPC's decisions were influenced by factors external to the IT framework.

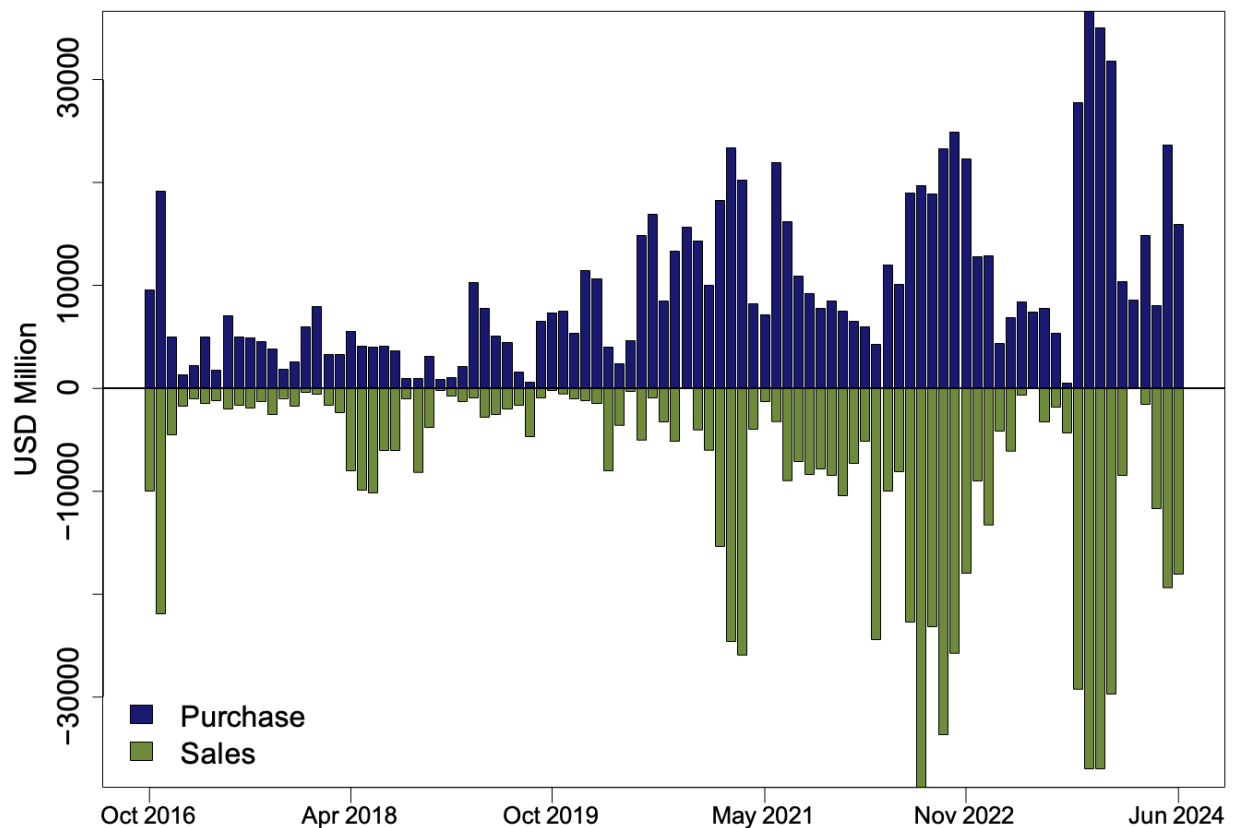
More concrete evidence of the RBI's focus on the exchange rate is provided by the increased stabilisation of the INR against the USD from late 2022 onward. Figure 1 shows that the exchange rate exhibited significantly lower volatility during this period, implying greater control by the RBI. Between April 2023 and July 2024, the average annualised volatility of the INR-USD was only 1.9% compared to the long-term average of 5% between 2000 and 2020. This was the lowest volatility of the exchange rate in the last three decades, including the period in the late 1990s and early 2000s when the rupee was closely pegged to the dollar. As seen in Figure 2, the RBI's interventions in the currency spot market increased substantially since late 2022, reflecting a very active role in managing the exchange rate.

Figure 1 Annualised volatility of the rupee-dollar rate



This figure shows the annualised volatility of the rupee-dollar rate. The figure shows that the volatility has reduced considerably since late 2022, indicating greater control over the rupee.

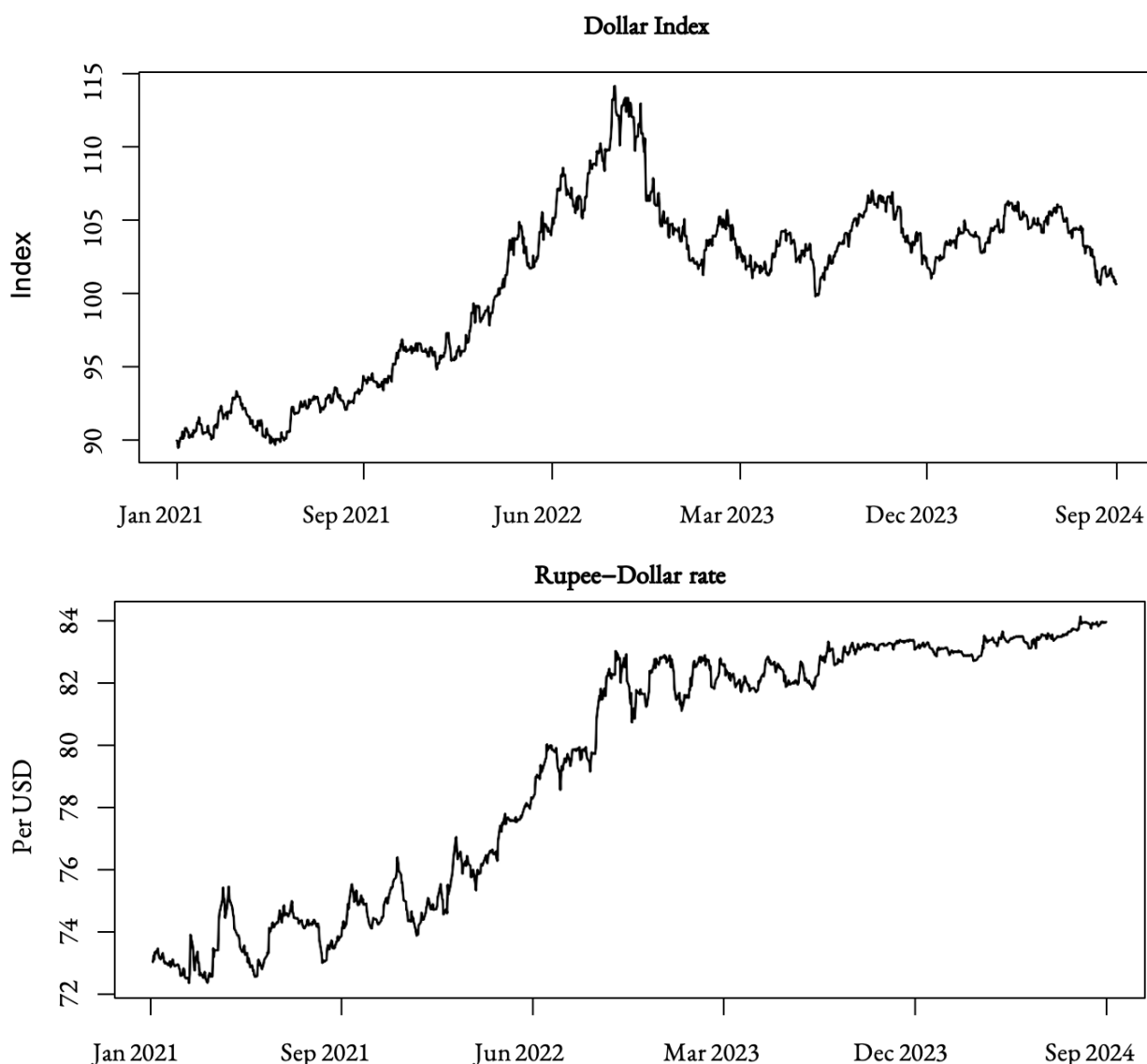
Source: RBI and author's calculations

Figure 2: RBI intervention in the spot market

This figure shows the purchase and sale of dollars by the RBI in the currency spot market. Since late 2022, the scale of intervention has increased significantly.

Source: RBI and CMIE Outlook

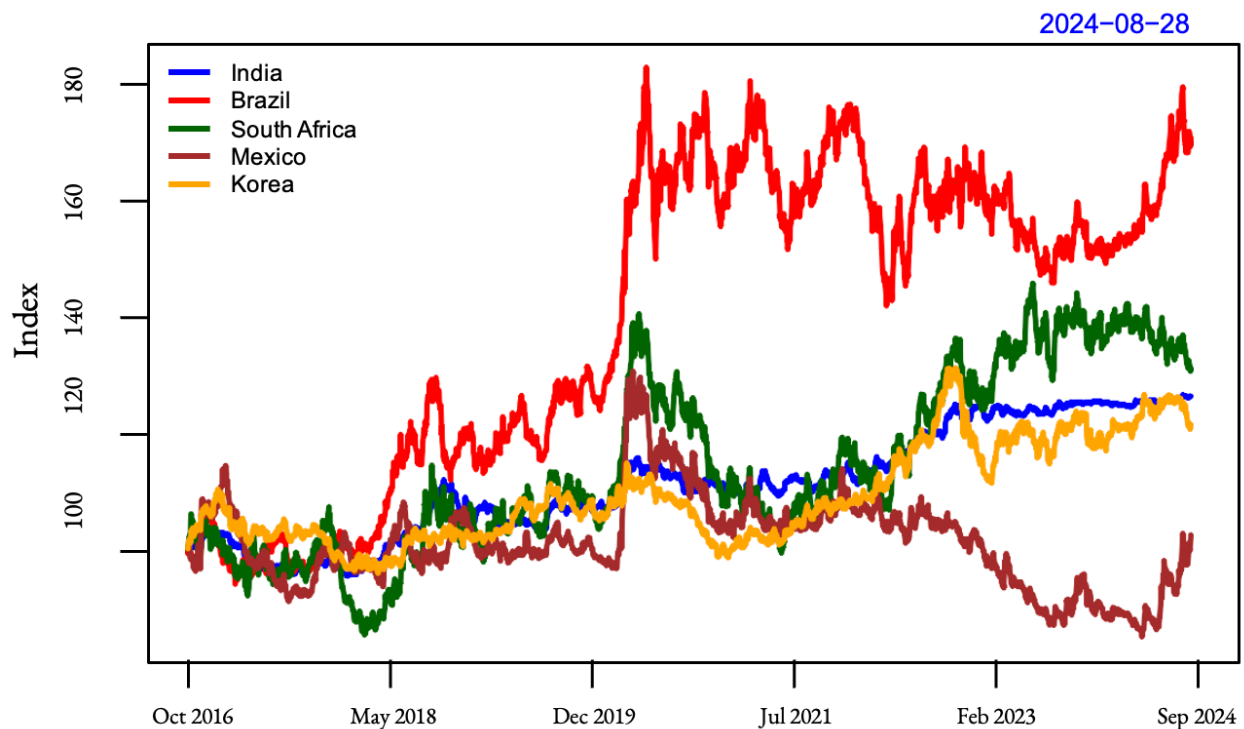
In the aftermath of the Covid-19 pandemic, the US Fed raised interest rates to combat the surge in inflation. Specifically, between March 2022 and July 2023, the Fed raised interest rate 11 times, pushing the federal funds rate to above 5% from near zero. This sharp rise in the interest rates pushed up the value of the dollar compared to other currencies. In a flexible exchange rate setting, this would have led to a weakening of the rupee. Figure 3 presents a comparison of the trajectory of the dollar index and the rupee-dollar rate. While the dollar index showed sharp fluctuations, the rupee dollar rate was relatively stable, particularly since the second half of 2022.

Figure 3: Dollar Index and Rupee Dollar Rate

Source: Yahoo Finance (for dollar index) and RBI

A currency regime is classified as a de-facto peg to a given currency when the volatility of the exchange rate against this currency is very low, owing to policy efforts by the central bank. A simple comparison of the volatility of the Indian rupee with that experienced in other countries can help obtain a cross-country sense of the extent of exchange rate flexibility in India (Patnaik, 2003).

We find that in comparison to its emerging economy peers, the rupee has exhibited the least volatility in recent times. Figure 4 shows the currencies of emerging economies indexed to 100 in October 2016 (since the inception of the inflation targeting framework). While most of the EM currencies depreciated in response to a stronger dollar in 2022, the rupee was stable. In fact, in FY2024, the rupee was the third most stable Asian currency against the USD after Singapore dollar and Hong Kong dollar owing to the RBI's active forex interventions.

Figure 4 Emerging market currencies: Indexed to 100 as on October 2016

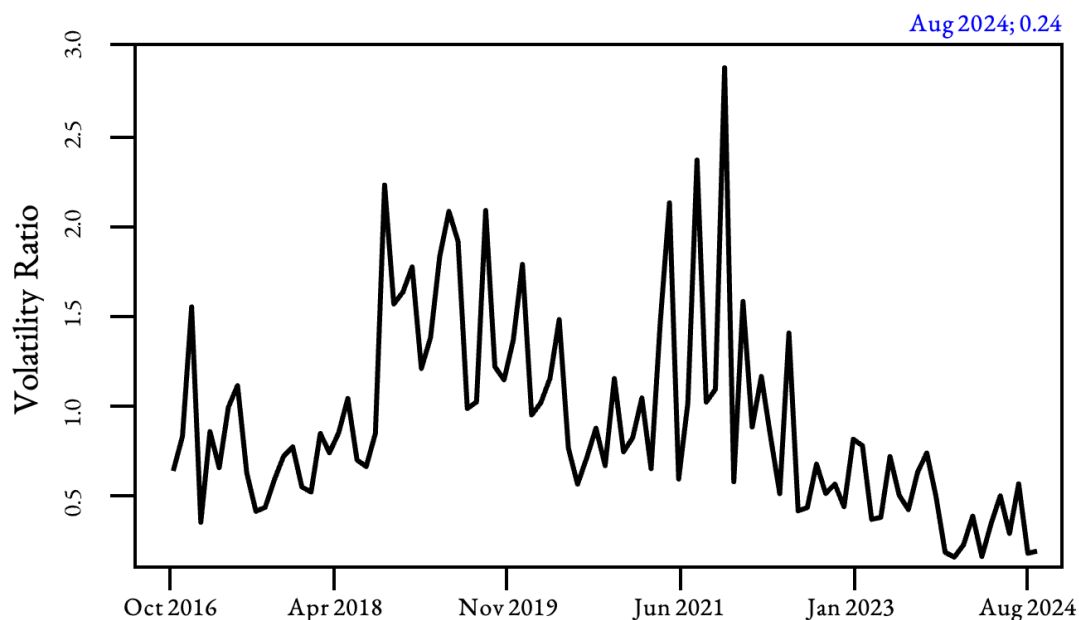
This figure shows the nominal exchange rate of EM currencies, indexed to 100 as on October 2016. The rupee was the most stable currency, suggesting active exchange rate intervention by the RBI.

The volatility of the EUR-USD exchange rate can give us a sense of the magnitude of the volatility that is expected under a floating exchange rate. Volatility is computed as the standard deviation of day-to-day changes in the logarithm of the exchange rate (Taylor, 1987). In Figure 5, we plot the ratio of the volatility of the INR-USD rate to the EUR-USD rate. We see that this ratio has been declining since the second half of 2022, suggesting evidence of a de-facto peg to the dollar.

FX interventions by the RBI can introduce distortions in the domestic monetary base, thereby disrupting the effective operation of the IT framework. Whenever the RBI buys or sells dollars, it also impacts the domestic money supply which in turn has consequences for inflation. For instance, when the RBI buys dollars in the FX market in order to prevent the INR-USD exchange rate from appreciating, it ends up expanding the domestic money supply which has inherent inflationary consequences. In 2023 and 2024 (data till September) the RBI was a net buyer of dollars in the spot market which would have increased the money supply. This happened at a time when CPI inflation still had not reached the 4% target, and the RBI was keeping the repo rate at 6.5% in order to address inflation. In other words, the RBI's operations in the currency market ran counter to its fight against inflation. In a way this seems to be a repeat of what happened in the 2004-2008 period when the RBI aggressively bought dollars to prevent a currency appreciation in the face of strong capital inflows and arguably this action created inflationary pressures in the domestic system. However back then the RBI did not have an IT mandate. To enhance the efficacy of the IT regime, it is therefore imperative to

substantially reduce the extent of exchange rate management. By minimising such interventions, the RBI can mitigate the associated distortions and better align monetary policy with its IT objectives.

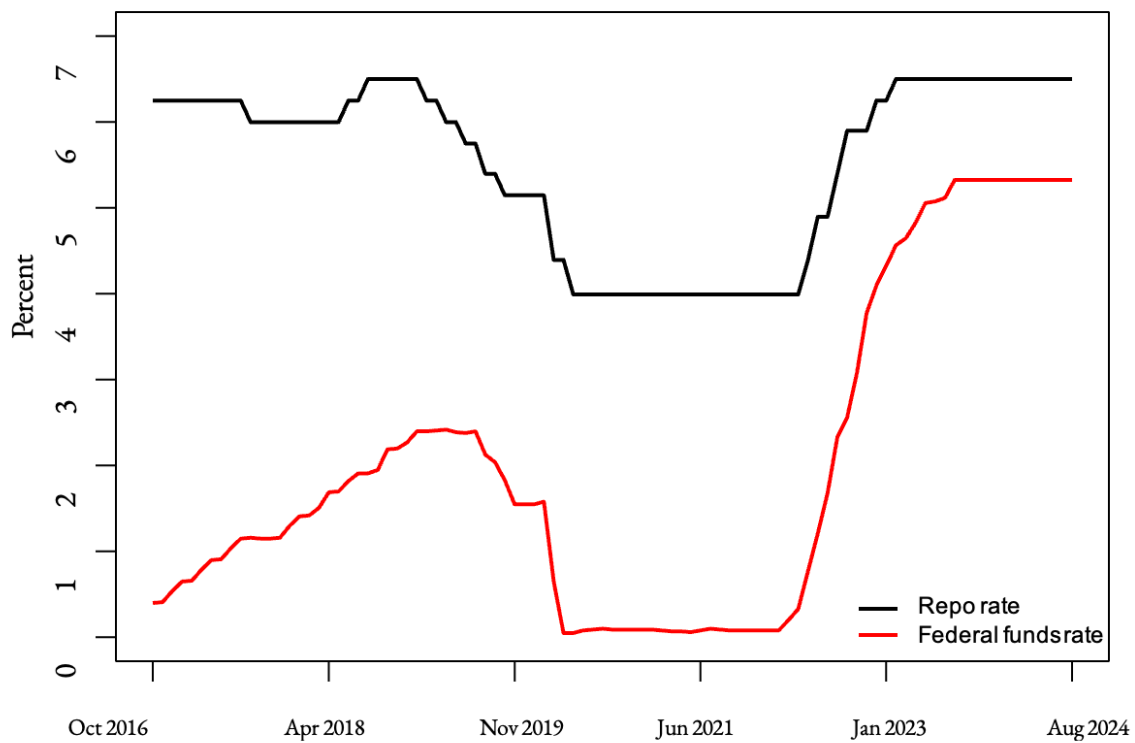
Figure 5 Ratio of volatility of the Rupee-dollar and the Euro-dollar rate



This figure shows the nominal exchange rate of EM currencies, indexed to 100 as on October 2016. The rupee was the most stable currency, suggesting active exchange rate intervention by the RBI.

Source: Yahoo Finance (for dollar index) and RBI

Exchange rate considerations also have more direct implications for the independence of monetary policy. While the MPC's monetary policy statements show that decisions to change the policy rate are guided by domestic inflation and growth considerations, there is a striking similarity between the trajectories of the US federal funds rate and the Indian repo rate (See Figure 6). It is also worth noting that the MPC's decision to raise the repo rate after a prolonged period of status quo, in an unscheduled policy meeting on May 4, 2022 happened on the same day when the US FOMC met and raised the federal funds rate by 50bps.

Figure 6 Repo rate and Federal Funds Effective rate

3.2 Conflict between monetary and debt management

One of the key pillars of a sound public debt management framework is the separation of monetary management from debt management. Several expert committees in India have over the years recommended separation of monetary management and debt management function⁵. In India, the RBI has been the debt manager to the government. It also owns or controls bond market infrastructure (exchange, clearing house and depository), and regulates the bond market. These arrangements were gradually put into place starting from the RBI Act, 1934, to the amendments in the Act (RBI Amendment Act, 2006). In this period, RBI did not have a clear objective, as was emphasised by the preamble of the RBI Act which described the agency as a ‘temporary provision’ (Pandey and Patnaik, 2017). However, the merits of freeing the RBI from its government debt management obligations strengthened after the adoption of an IT framework. There is a conflict of interest between the RBI’s objective as a central bank (to deliver a target rate of inflation) and the RBI’s objective as a debt manager (to deliver a low cost of borrowing for the government).

The RBI’s current mandate does not allow it to step in to manage the government’s borrowing costs. Steps taken by the central bank to lower the government’s borrowing costs through interventions such as the open market purchase of G-Secs may run counter to a tight monetary policy stance and confuse the market participants. For instance, in May 2018, the RBI announced open market purchase of G-Secs for Rs 100 billion (Reserve Bank of India, 2018). Typically, open market operations (OMOs) are conducted to anchor the weighted average call money rate closer to the policy repo rate. But around this time, the weighted average call rate was already range-bound, closer to the

repo rate of 6% but the 10-year bond yield was inching up. Arguably, the OMO was conducted to lower the cost of borrowings for the government.

4. Monetary policy process

The MPC meetings in India are held once every two months. At the end of each meeting, a statement describing the monetary policy decision, known as the Resolution of the Monetary Policy Committee, is published on the RBI website. Each statement starts with a mention of the repo rate decision, then goes on to discuss the domestic as well as external economic outlook, outlines the forecasts of GDP growth and inflation and ends with a mention of the votes cast by the MPC members. According to the amended RBI Act, the MPC members' remit is to decide the policy rate, which is the repo rate, that is required to achieve the inflation target.

4.1 Meetings and voting patterns under the first MPC

The first MPC was constituted on September 29, 2016 for a tenure of four years⁶. The three internal members in this committee were, the RBI Governor, the Deputy Governor in charge of the monetary policy, and an officer of the RBI nominated by the Central Board. Dr. Chetan Ghate (Professor at the Indian Statistical Institute), Dr. Pami Dua (Director of the Delhi School of Economics) and Dr. Ravindra Dholakia (Professor at the Indian Institute of Management Ahmedabad) were the external members appointed by the Central Government. The meetings of the first MPC were held under two RBI governors: Urjit Patel and Shaktikanta Das.

Table 1 describes the MPC decisions on the policy rate and the stance of monetary policy in the meetings held between 2016 and 2020. Table 2 shows the voting patterns of the MPC members in these meetings and hence the votes cast in favour of or against the MPC decision. We highlight below some of the salient features of the meetings of the first MPC as seen from these tables.

- Between October 2016 and April 2018, the MPC mostly maintained status quo on the policy repo rate, which was reduced only twice, by 25bps both times (October 4, 2016 and August 2, 2017). This is when headline CPI inflation averaged at 3.6%.
- From October 2018 onwards the repo rate was kept unchanged till February 2019. Therefore, under Patel, in 10 of the 14 MPC meetings held during the period from October 2016 to December 2018, the policy rate was left unchanged implying that the emphasis was largely on maintaining the status quo. This made sense given that the average CPI inflation during the period from October 2016 to December 2018 was less than 4% (3.7%).
- The trend of status quo on rates got reversed under the chairmanship of Das who took office from February 2019 onwards. Of the 10 meetings of the first MPC held during his tenure, the repo rate was reduced in 7 meetings and left unchanged in 3. During February 2019 to October 2019, the repo rate was consistently reduced in every MPC meeting as a result of

which it came down from 6.5% to 5.15%. This was motivated by the fact that average CPI inflation during this period was only 3% whereas real GDP growth had been slowing down considerably.

- When the Covid-19 pandemic hit India in 2020, the MPC further cut the repo rate from 5.15% to 4% in two consecutive, unscheduled meetings, on March 27, 2020 and May 22, 2020. We discuss the monetary policy during the pandemic in greater detail in the next subsection.
- During Patel's tenure as chairman of the first MPC, the monetary policy stance was mostly neutral (10 out of 14 meetings).
- On the contrary, under the chairmanship of Das, the monetary policy stance was mostly accommodative (8 out of 10 meetings). It was neutral in two meetings (February 7, 2019 and April 4, 2019). A neutral or accommodative monetary stance was accompanied by a policy rate reduction or a rate status quo.
- A study of the voting patterns shows that when the MPC was first formed, in the initial few meetings there was no dissent among the members. After four meetings, the first dissent was recorded on June 7, 2017 when external member Dr Ravindra H. Dholakia voted against the resolution and voted for a 50bps rate cut from 6.25% to 5.75%. Since then, almost every meeting was characterised by at least one dissent as detailed in Table 2. This implies that diversity arose in the voting patterns with the passage of time and maybe as the MPC members themselves got more familiar with the IT framework. Out of the 14 meetings of the first MPC held during Patel's tenure, the decision of the MPC was unanimous in only 6 meetings.⁷
- Under the chairmanship of Das, of the 10 meetings held of the first MPC, the monetary policy decision was unanimously accepted in 4 out of the 10 meetings

Table 1 MPC-1: Decisions on the policy rate and stance

Meeting	Decision on policy rate	Stance
4th October, 2016	Reduce by 25 basis points from 6.5% to 6.25%	Accommodative
7th December 2016	Unchanged at 6.25%	Accommodative
8th February, 2017	Unchanged at 6.25%	Neutral
6th April, 2017	Unchanged at 6.25%	Neutral
7th June, 2017	Unchanged at 6.25%	Neutral
2nd August, 2017	Reduce by 25 basis points from 6.25% to 6.0%	Neutral
4th October, 2017	Unchanged at 6%	Neutral
6th December, 2017	Unchanged at 6%	Neutral
7th February, 2018	Unchanged at 6%	Neutral
5th April, 2018	Unchanged at 6%	Neutral
6th June, 2018	Increase by 25 basis points from 6% to 6.25%	Neutral
1st August, 2018	Increase by 25 basis points from 6.25% to 6.5%	Neutral
5th October, 2018	Unchanged at 6.5%	Calibrated tightening
5th December, 2018	Unchanged at 6.5%	Calibrated tightening
7th February, 2019	Reduce by 25 basis points from 6.5% to 6.25%	Neutral
4th April, 2019	Reduce by 25 basis points from 6.25% to 6%	Neutral
6th June, 2019	Reduce by 25 basis points from 6% to 5.75%	Accommodative
21st August, 2019	Reduced by 35 basis points from 5.75% to 5.40%	Accommodative
4th October, 2019	Reduced by 25 basis points from 5.40% to 5.15%	Accommodative
5th December, 2019	Unchanged at 5.15%	Accommodative
6th February, 2020	Unchanged at 5.15%	Accommodative
27th March, 2020 [#]	Reduced by 75 basis points from 5.15% to 4.40%	Accommodative
22nd May, 2020 [#]	Reduced by 40 basis points from 4.40% to 4%	Accommodative
6th August, 2020	Unchanged at 4%	Accommodative

[#] Unscheduled meetings

This table shows the decisions on the policy rate and stance by the members of first monetary policy committee.

Table 2 Voting patterns in MPC-1 meetings

Meeting date	Voted in favour of the resolution	Vote against the decision of MPC
4th October, 2016	All members voted in favour of a rate cut from 6.5% to 6.25%	–
7th December 2016	All members voted in favour of status quo on policy rate	–
8th February, 2017	All members voted in favour of status quo on policy rates	–
6th April, 2017	All members voted in favour of status quo on policy rates	–
7th June, 2017	5 members voted in favour of status quo	1 member voted against the decision and instead voted for 50 basis points rate cut
2nd August, 2017	4 members voted in favour of a rate cut from 6.25% to 6%	1 member voted against the decision and instead voted for 50 bps reduction, While 1 member voted for status quo
4th October, 2017	5 members voted in favour of keeping the rate unchanged at 6%	1 member voted against the decision and instead voted for at least 25 bps reduction
6th December, 2017	5 members voted in favour of keeping the rate unchanged at 6%	1 member voted against the decision and instead voted for 25 bps reduction
7th February, 2018	5 members voted in favour of keeping the rate unchanged at 6%	1 member voted against the decision and instead voted for 25 bps increase
5th April, 2018	5 members voted in favour of keeping the rate unchanged at 6%	1 member voted against the decision and instead voted for 25 bps increase
6th June, 2018	All members voted in favour of a rate increment from 6% to 6.25%	–
1st August, 2018	5 members voted in favour of increasing the rate to 6.5%	1 member voted against the decision
5th October, 2018	5 members voted in favour of keeping the rate unchanged at 6.5%	1 member voted against the decision and instead voted for 25 bps increment
5th December, 2018	All members voted in favour of status quo on policy rate	–
7th February, 2019	4 members voted in favour of a rate cut from 6.5% to 6.25%	2 members voted against the decision and instead voted for no change in rate
4th April, 2019	4 members voted in favour of a rate cut from 6.25% to 6%	2 members voted against the decision and instead voted for no change in rate
6th June, 2019	All members voted in favour of a rate cut from 6% to 5.75%	–
21st August, 2019	All members voted in favour of a rate cut from 5.75% to 5.40%	2 members voted against the decision and instead voted for 25 basis point reduction
4th October, 2019	All members voted in favour of a rate cut from 5.40% to 5.15%	1 member voted against the decision and instead voted for 40 basis point reduction
5th December, 2019	All members voted in favour of keeping the rate unchanged	–
6th February, 2020	All members voted in favour of keeping the rate unchanged	–
27th March, 2020 [#]	4 members voted in favour of a rate cut from 5.15% to 4.40%	2 members voted against the decision and instead voted for 50 basis point reduction
22nd May, 2020 [#]	5 members voted in favour of a rate cut from 4.40% to 4%	1 member voted against the decision and instead voted for 25 basis point reduction
6th August, 2020	All members voted in favour of keeping the rate unchanged	–

- Unscheduled meetings

This table shows the voting patterns of the MPC members with respect to the policy repo rate i.e. the instances where the MPC members voted in favour of the resolution and against the resolution.

4.2 Meetings and voting patterns under the second MPC

The second MPC was constituted on October 5, 2020 for a tenure of four years and coincided with the spread of Covid-19 pandemic in India. Like the first MPC, the three internal members in this committee were, the RBI Governor, the Deputy Governor in charge of the monetary policy, and an officer of the RBI nominated by the Central Board. Dr. Shashanka Bhide (Senior Advisor at the National Council of Applied Economic Research (NCAER)), Dr. Ashima Goyal (Professor at the Indira Gandhi Institute of Development Research) and Dr. Jayanth R. Varma (Professor at the Indian Institute of Management, Ahmedabad) replaced the earlier external members. All meetings of the second MPC have been held under Governor Shaktikanta Das.

Table 3 describes the MPC decisions on the policy rate and the stance of the monetary policy in the meetings held between 2020 and 2024. Table 4 shows the voting patterns of the MPC members in these meetings.

- For more than half of the tenure of the second MPC, status quo was maintained on the repo rate, in two phases: first, between October 2020 and April 2022 when the repo rate was held steady at 4% in all the MPC meetings and second, between April 2023 and August 2024 when the repo rate was held constant at 6.5% in all the MPC meetings. The first phase coincided with the Covid-19 pandemic when monetary policy was arguably focused more on supporting demand and GDP growth as opposed to tackling inflation. The second phase of status quo on policy rate coincided with a period of persistently high inflation.
- Similar trends were seen in the monetary policy stance as well. From October 2020 to April 2022 the status quo on the repo rate was accompanied by a status quo on the stance which was accommodative. At the unscheduled meeting in May 2022 this was changed to “remain accommodative while focusing on withdrawal of accommodation”. From then onwards the stance became “withdrawal of accommodation” which continued till the last meeting of this MPC.
- A study of the voting patterns shows that there was no dissent on the policy rate decision during the entire time that status quo on the repo rate was maintained between October 2020 and April 2022.
- The first time a dissent happened in the second MPC was on September 30, 2022 when repo rate was raised by 50bps, but one MPC member (Ashima Goyal) voted for a 35bps increase.
- The next meeting on December 7, 2022 also saw a dissent. Four MPC members voted in favour of raising the repo rate from 5.9% to 6.25% whereas one MPC member (Jayanth Varma) voted against this decision. He and Ashima Goyal also voted against the monetary stance of “withdrawal of accommodation”.

- At the next meeting on February 8, 2023, when the repo rate was again hiked from 6.25% to 6.5%, two MPC members (Ashima Goyal and Jayanth Varma) voted against the decision.
- At the subsequent MPC meetings in April, June, October and December 2023, the decision to keep the repo rate unchanged at 6.5% was unanimously accepted by all MPC members.
- February 2024 onwards every MPC meeting witnessed a dissent.
- Thus, from September 2022 onward the meetings of the second MPC saw a fair bit of diversity of opinion among the members, with some members being more “dovish” than the “hawkish” position of majority of the MPC.

Table 3 MPC-2: Decisions on the policy rate and stance

Meeting	Decision on policy rate	Stance
9th October, 2020	Unchanged at 4%	Accommodative
4th December, 2020	Unchanged at 4%	Accommodative
5th February, 2021	Unchanged at 4%	Accommodative
7th April, 2021	Unchanged at 4%	Accommodative
4th June, 2021	Unchanged at 4%	Accommodative
6th August, 2021	Unchanged at 4%	Accommodative
8th October, 2021	Unchanged at 4%	Accommodative
8th December, 2021	Unchanged at 4%	Accommodative
10th February, 2022	Unchanged at 4%	Accommodative
8th April, 2022	Unchanged at 4%	Accommodative
4th May, 2022*	Increase by 40 basis points from 4% to 4.40%	Accommodative [#]
8th June, 2022	Increase by 50 basis points from 4.40% to 4.90%	Withdrawal of accommodation
5th August, 2022	Increase by 50 basis points from 4.90% to 5.40%	Withdrawal of accommodation
30th September, 2022	Increase by 50 basis points from 5.40% to 5.90%	Withdrawal of accommodation
7th December, 2022	Increase by 35 basis points from 5.90% to 6.25%	Withdrawal of accommodation
8th February, 2023	Increase by 25 basis points from 6.25% to 6.50%	Withdrawal of accommodation
6th April, 2023	Unchanged at 6.50%	Withdrawal of accommodation
8th June, 2023	Unchanged at 6.50%	Withdrawal of accommodation
10th August, 2023	Unchanged at 6.50%	Withdrawal of accommodation
6th October, 2023	Unchanged at 6.50%	Withdrawal of accommodation
8th December, 2023	Unchanged at 6.50%	Withdrawal of accommodation
8th February, 2024	Unchanged at 6.50%	Withdrawal of accommodation
5th April, 2024	Unchanged at 6.50%	Withdrawal of accommodation
7th June 2024	Unchanged at 6.50%	Withdrawal of accommodation
8th August 2024	Unchanged at 6.50%	Withdrawal of accommodation

* Unscheduled meeting.

[#] Remain accommodative while focusing on withdrawal of accommodation

This table describes the decisions of the members of MPC-2 on the policy rate and the stance of monetary policy

Table 4 Voting patterns in MPC-2 meetings

Meeting date	Voted in favour of the resolution	Vote against the decision of MPC
9th October, 2020	All members voted in favour of status quo on policy rate	-
4th December, 2020	All members voted in favour of status quo on policy rate	-
5th February, 2021	All members voted in favour of status quo on policy rate	-
7th April, 2021	All members voted in favour of status quo on policy rate	-
4th June, 2021	All members voted in favour of status quo on policy rate	-
6th August, 2021	All members voted in favour of status quo on policy rate	-
8th October, 2021	All members voted in favour of status quo on policy rate	-
8th December, 2021	All members voted in favour of status quo on policy rate	-
10th February, 2022	All members voted in favour of status quo on policy rate	-
8th April, 2022	All members voted in favour of status quo on policy rate	-
4th May, 2022	All members voted in favour of increasing the rate from 4% to 4.40%	-
8th June, 2022	All members voted in favour of increasing the rate from 4.40% to 4.90%	-
5th August, 2022	All members voted in favour of increasing the rate from 4.90% to 5.40%	-
30th September, 2022	4 members voted in favour of increasing the rate from 5.40% to 5.90%	1 member voted against the decision and instead voted for 35 bps increase
7th December, 2022	4 members voted in favour of increasing the rate from 5.90% to 6.25%	1 member voted against the decision and instead voted for status quo
8th February, 2023	3 members voted in favour of increasing the rate from 6.25% to 6.50%	2 members voted against the decision
6th April, 2023	All members voted in favour of status quo on policy rate	-
8th June, 2023	All members voted in favour of status quo on policy rate	-
10th August, 2023	All members voted in favour of status quo on policy rate	-
6th October, 2023	All members voted in favour of status quo on policy rate	-
8th December, 2023	All members voted in favour of status quo on policy rate	-
8th February, 2024	4 members voted in favour of status quo on policy rate	1 member voted against the decision and instead voted for 25 bps reduction
5th April, 2024	5 members voted in favour of status quo on policy rate and one member voted against the decision and instead voted for 25 bps reduction	
7th June, 2024	4 members voted in favour of status quo on policy rate	2 members voted against the decision and instead voted for 25 bps reduction
8th August, 2024	4 members voted in favour of status quo on policy rate	2 members voted against the decision and instead voted for 25 bps reduction

This table presents the voting patterns of members of MPC-2. This table captures the decisions on voting in relation to the policy rate. Table shows that there were fewer instances of dissent on the policy rate decisions in MPC-2 as compared to MPC-1.

4.3 Conduct of monetary policy during Covid

During the Covid-19 pandemic, the monetary policy conduct of the RBI deviated significantly from the standard IT framework. The deviations were mainly on two counts: shifting away from the repo rate as the primary instrument of monetary policy and deviating from the symmetric width of the Liquidity Adjustment Framework (LAF) corridor.

During the first wave of the Covid-19 pandemic, the RBI in its unscheduled meeting on March 27, 2020, announced a widening of the LAF corridor from 50bps to 65bps thereby making it asymmetric for the first time. (Reserve Bank of India, 2020a) Under the new corridor, the reverse repo rate would be 40 bps lower than the policy repo rate. The marginal standing facility (MSF) rate would continue to be 25 bps above the policy repo rate. Under this new asymmetric corridor, the repo rate was lowered by 75bps to 4.40% from 5.15%, and the reverse repo rate was lowered by 90 bps to 4%.

The width of the corridor became even more asymmetric when in April 2020, the reverse repo rate was lowered without any changes to the repo rate. On April 17, 2020, the RBI Governor in his unscheduled address announced a 25bps reduction in the reverse repo rate from 4% to 3.75%. This was done to discourage banks from parking their excess funds with the RBI and to nudge banks to lend. As a result, the width of the LAF corridor widened to 90bps from 65bps. Figure 7 shows the evolution of the width of the LAF corridor from April 2019 to August 2024.

Some of the external members of the MPC voiced concerns about the unilateral tinkering of the reverse repo rate by the RBI Governor. In the minutes of the MPC meeting released on May 22, 2020, one of the external members, Chetan Ghate opined that tinkering with the reverse repo rate has made the reverse repo rate, the effective policy rate (Reserve Bank of India, 2020b). This was a valid concern given that as per the amended RBI Act, the MPC can only decide the repo rate and not explicitly the reverse repo rate which until then was automatically linked to the repo rate.

Similar concerns on the reverse repo rate were echoed by Jayanth Varma in the minutes of the MPC meeting released on August 20, 2021. He raised opposition to the mention of reverse repo rate in the monetary policy statements: "Consequently, the reverse repo rate under the LAF remains unchanged at 3.35%". He argued that if the reverse repo rate does not fall within the remit of the MPC, then the announcement of this rate should be in the Governor's statement and not in the MPC's statement, but this view did not find favour with the rest of the MPC. (Reserve Bank of India, 2021a)

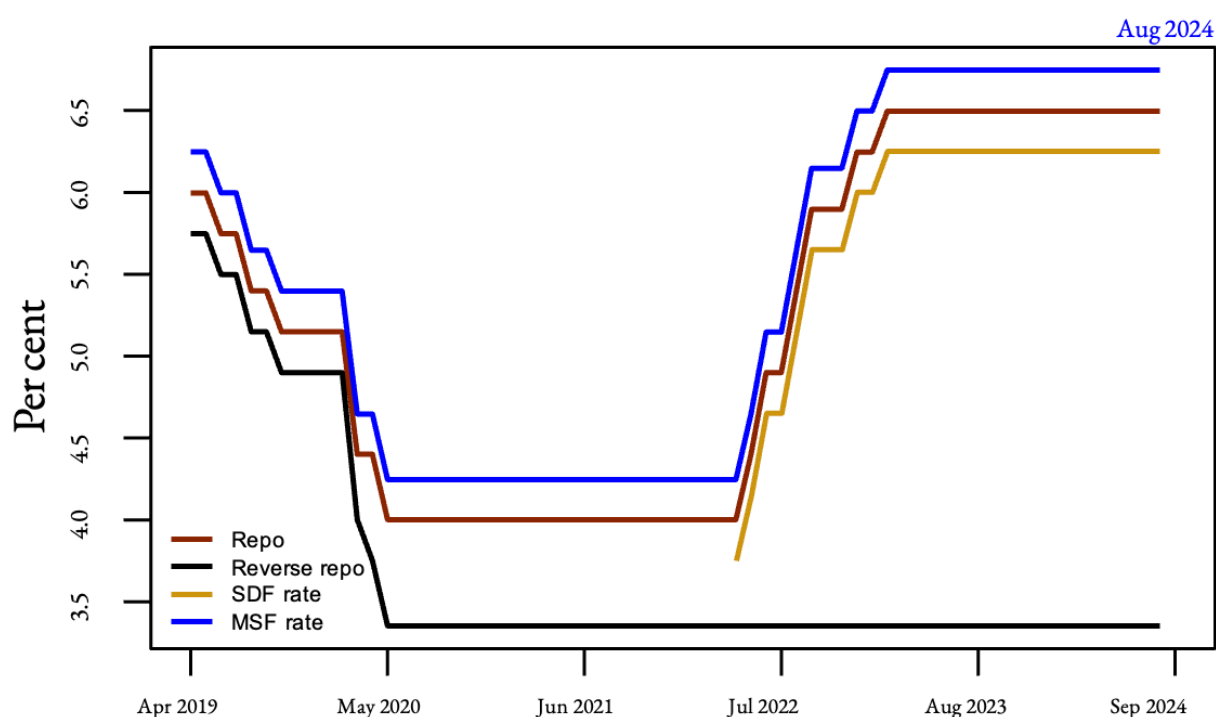
Finally in April 2022, the Statement on Development and Regulatory Policies announced that the LAF corridor would be restored to 50bps similar to the pre-pandemic period. The meeting also announced that the Standing Deposit Facility (SDF) rate will replace the reverse repo as the floor of the LAF corridor. This is a more permanent absorption of liquidity wherein the banks voluntarily deposit excess funds with the RBI for a much longer period compared to the reverse repo rate operations.

At the start of the pandemic, in addition to the reduction in repo rate by 75bps and 40bps respectively in March and May 2020, the RBI announced a series of unconventional monetary policy measures in order to enhance liquidity. These measures were all outside the remit of the MPC and

hence were not included as part of the MPC statements, rather they were announced separately by the Governor—yet another deviation from the IT framework.

(Lakdawala et al., 2023) investigate the impact of the RBI's unconventional monetary policy actions undertaken during the pandemic, on the bond market. They find that the RBI's actions early in the pandemic were helpful in providing an expansionary impulse to the bond market, but the actions adopted later on in the pandemic were relatively less effective.

Figure 7 LAF corridor



Note: This figure shows the width of the LAF corridor which turned asymmetric during the Covid period. In March 2020, the RBI announced the widening of the LAF corridor from 50bps to 65bps. In April 2020, the corridor became even more asymmetric following a unilateral cut in the reverse repo rate. The width of the corridor was restored to 50bps in April 2022.

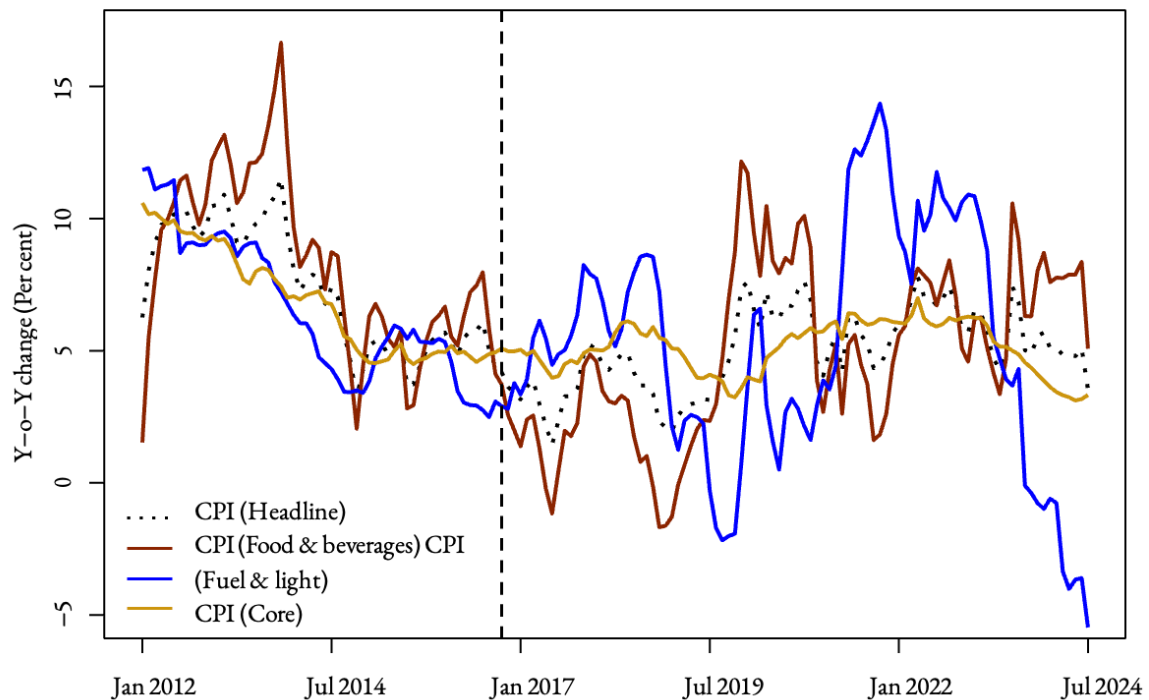
5. Inflation performance

Figure 8 shows the trajectory of headline CPI inflation since January 2012 i.e. from before the adoption of the IT framework⁸. Since the start of the IT regime (marked with the dashed vertical line), inflation moderated from the high and persistent levels seen during 2012 and 2013. However, there were periods when it exceeded the upper threshold of 6% as prescribed in the IT framework. Figure 8 demonstrates the drivers of inflation. Typically, periods of high headline inflation are characterised by high food inflation. This is evident in both the pre- and post-IT regimes. In some periods, high fuel prices have also led to a spurt in headline inflation. For instance, in FY2022, while the headline inflation temporarily eased from its pandemic highs (triggered by supply side disruptions), core

inflation began inching up, driven by a rise in international commodity prices that in turn led to a rise in prices of key inputs (Reserve Bank of India, 2021b).

In the subsections below we present an overview of the inflation performance under the two MPCs.

Figure 8 Inflation of major components in CPI basket



Note: This figure shows the trajectory of headline inflation (year-on-year change in CPI) and its constituents. Typically, periods of high headline inflation are characterised by high food inflation. There have been periods when headline inflation showed signs of easing while core inflation inched up. Fuel prices were seen to be elevated in 2022, before falling sharply in the second half of 2023.

5.1 Inflation performance under the two MPCs

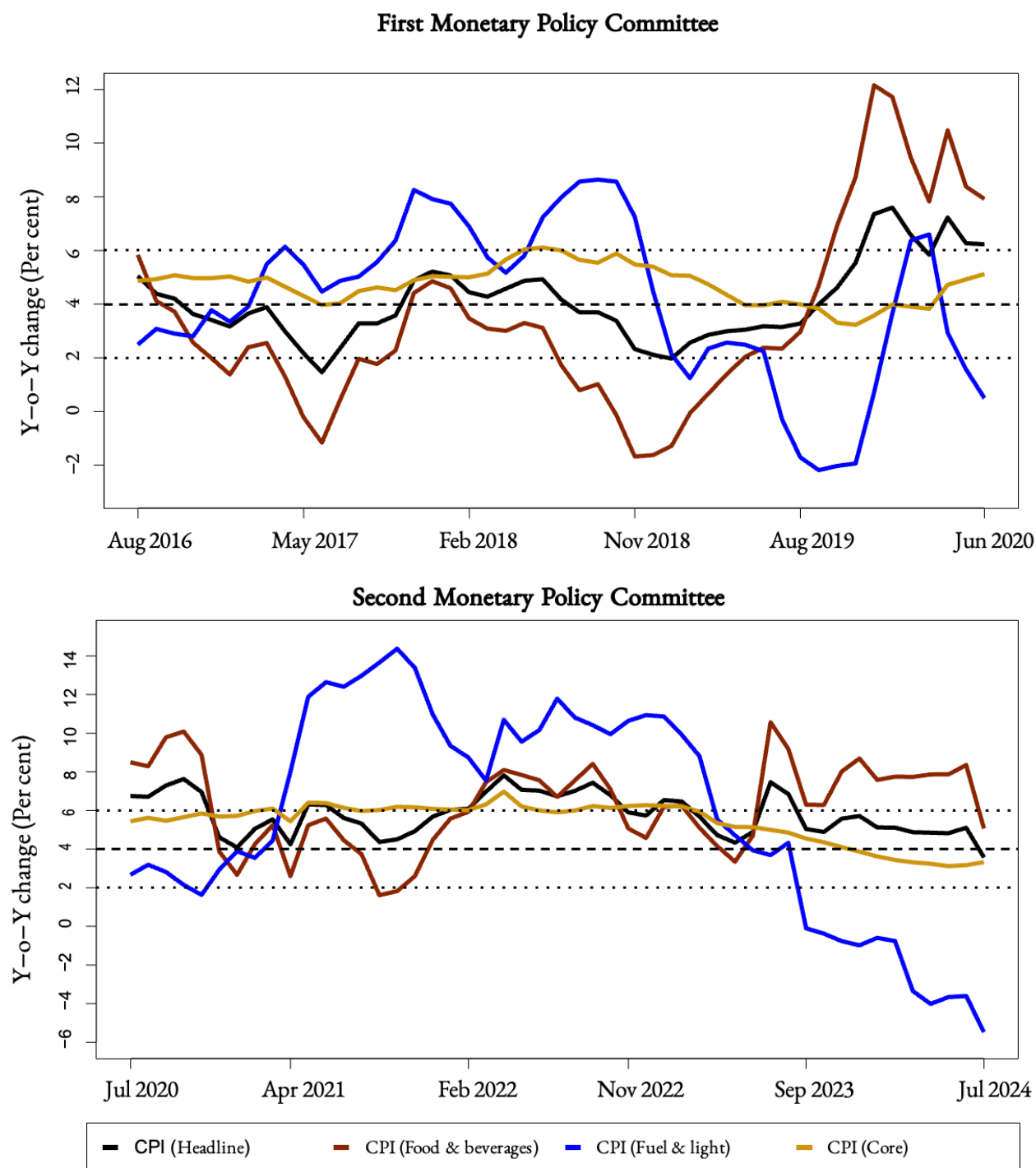
Figure 9 shows the evolution of headline inflation and its components during the tenures of the two MPCs. During the tenure of the first MPC, inflation remained broadly range-bound.

From December 2016 to October 2017, inflation was below 4% thereby prompting the MPC to cut the repo rate twice—once in October 2016 and then again in August 2017, as mentioned earlier. After remaining in the range of 4-5%, CPI inflation decelerated from August 2018 onwards and remained less than 4% all the way till October 2019. This motivated the MPC to undertake monetary expansion on a consistent basis from February 2019 to October 2019 when the repo rate was lowered from 6.5% to 5.15%.

From November 2019 till June 2020, inflation inched up and was above the upper threshold of 6 percent for most of the months in this period. Thus, inflation was elevated even before the onset of the Covid-19 pandemic. It had spiked to 7.4% in December 2019 and further to 7.6%

in January 2020 due to rise in prices of vegetables, pulses, meat and eggs. During the remaining months of the first MPC's tenure, inflation remained in the range of 6-7% primarily due to pandemic-led supply chain disruptions.

Figure 9 Inflation and its components under the two MPCs



This figure shows the performance of inflation and its key constituents during the tenure of the two MPCs. Excluding end-2019 and the first half of 2020, headline inflation was broadly closer to the 4% target under the tenure of the first MPC. During the second MPC, inflation was elevated on account of the Covid-related disruptions, and surge in international commodity prices, following the Russia-Ukraine conflict.

The average inflation during the tenure of the first MPC was 4.2%. However, the range was quite broad-the lowest inflation during this period was 1.5% in June 2017 and the highest was 7.6% in January 2020.

The first few months of the second MPC were marred by inflation breaching the upper threshold of 6% as a result of pandemic and lockdown related supply constraints. After temporarily subsiding in 2021, inflation again became high and volatile from 2022 onward. With the Russian invasion of Ukraine in February 2022, supply disruptions became worse which led to a rise in global commodity prices and consequently an uptick in domestic headline inflation. In addition to this, irregular monsoons led to sharp rises in food prices, especially in the prices of cereals and vegetables. The average CPI inflation in FY2023 was 6.6%. High, and persistent inflation led the MPC to announce consecutive policy rate hikes from May 2022 till February 2023. Cumulatively, the policy repo rate was hiked by 250bps during this period. The average inflation during the tenure of the second MPC was 5.8%. Inflation during this period ranged between 4.1% in January 2021 to 7.8% in April 2022.

During the tenure of the second MPC, the RBI failed to achieve the inflation target. According to the amended RBI Act, the RBI will be deemed to have failed to achieve the inflation target if the average CPI inflation is more than the upper tolerance level of 6%, or less than the lower tolerance level of 2% for any three consecutive quarters. CPI inflation was 6.3% in the March quarter, 7.3% in the June quarter and 7% per cent in the September quarter of calendar year 2022. The average CPI inflation between January 2022 and September 2022 was 6.9%.

In the event of a failure to achieve the inflation target, Section 45ZN of the amended RBI Act requires the RBI to inform the government of the reasons for failure to achieve the inflation target, the remedial actions it proposes to take and an estimate of the time within which the inflation target shall be achieved after the implementation of the remedial actions. The report is required to be sent within one month from the date on which RBI failed to meet the inflation target. As the September 2022 inflation data was released on 12 October, the RBI had to submit the report by 12 November (Pandey, 2022). As per the law, an additional MPC meeting was held on November 3, 2022 to discuss and draft the report to be sent to the government.

Table 5 Mean and standard deviation of CPI (y-o-y) growth in the pre and post IT regime

Inflation	Mean				Standard Deviation			
	Pre-IT		Post-IT		Pre-IT		Post-IT	
		Total	Pre-COVID	Post-COVID		Total	Pre-COVID	Post-COVID
Headline	7.26	4.95	3.88	5.82	2.39	1.53	1.33	1.06
Food & Beverage	8.49	4.89	2.9	6.44	3.4	3.21	3.15	2.26
Core	6.53	5.07	4.75	5.34	1.77	0.95	0.73	1.04

Note: This table reports the mean and standard deviation of the headline inflation in the pre and post IT regimes. The post IT period is further bifurcated into pre and post Covid periods. The table shows that the average

inflation in the post IT regime is lower than the pre-IT period. Additionally, inflation is seen to be less volatile in the post IT regime period.

Table 5 reports the mean and standard deviation of CPI inflation (y-o-y) for the pre and post IT regimes. The pre-IT regime corresponds to the period from July 2012 to July 2016. The post-IT regime is further bifurcated into pre-Covid (August 2016 - February 2020) and post Covid (March 2020 onward). Table shows that the average inflation is lower in the post IT regime. In the post IT regime, on expected lines, the average inflation in the post Covid period is higher than the pre-Covid period. Even then, the average inflation during the post Covid period is lower than in the pre-IT regime. The table also shows that inflation has turned less volatile post the adoption of the inflation targeting framework.

6. Monetary policy transmission

6.1 Transmission through the banking sector

In a bank-dominated economy like India's, a key objective of monetary policy is quick and effective transmission of the policy rate changes to deposit and lending rates in the banking sector. Earlier literature pointed to a slow, incomplete and an asymmetric adjustment to monetary policy: the lending rate adjusted more quickly to monetary tightening than to easing (Das, 2015; Singh, 2011; Acharya, 2017). A key reason for the muted transmission was that a sizable proportion of loan portfolio of banks was linked to the base rate system. Banks' reluctance to alter the rate on savings deposits also hindered the transmission of policy rate changes (Acharya, 2017).

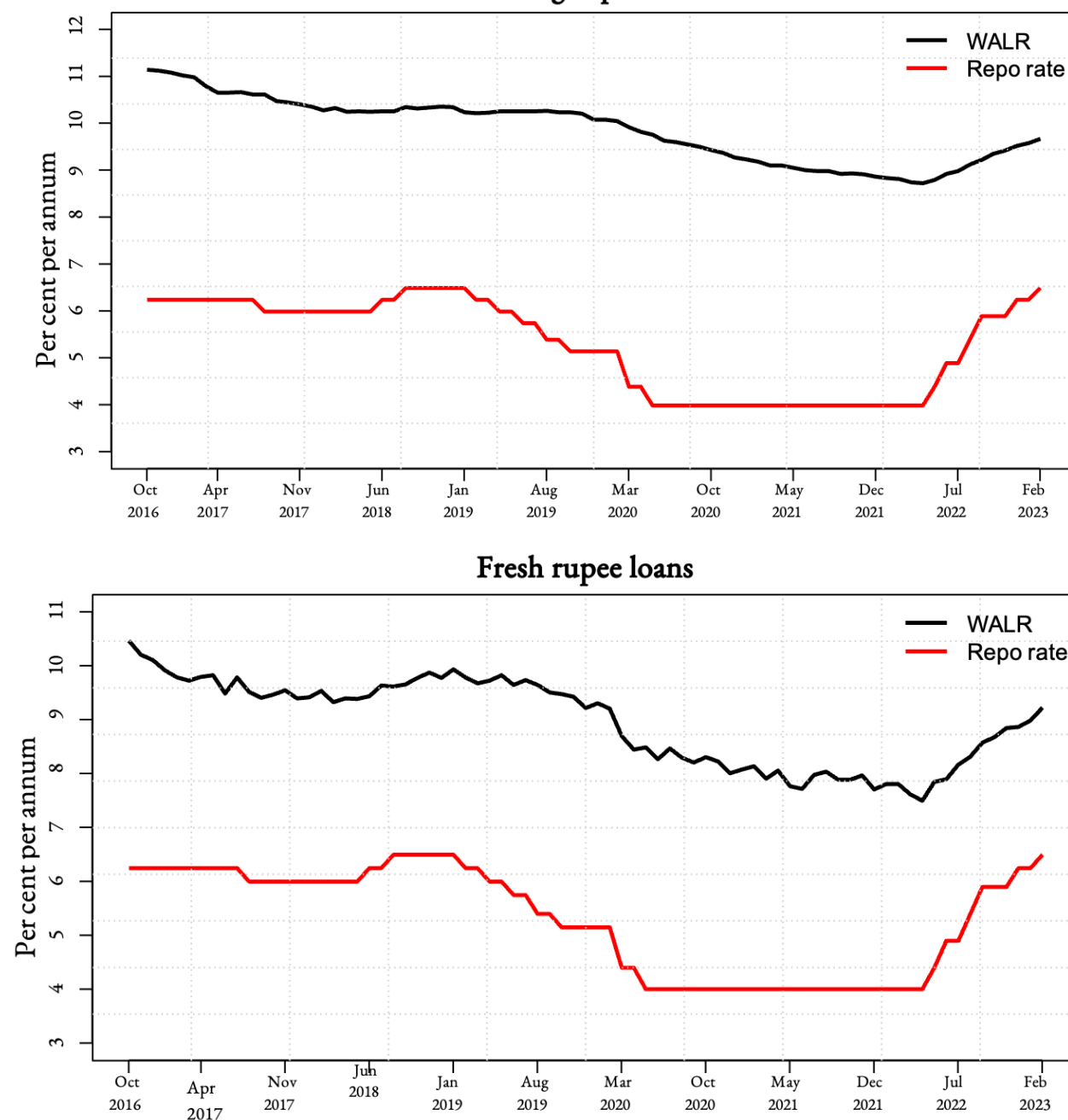
However, the speed of adjustment of deposit and lending rates to changes in policy rate has improved in the recent years, particularly since the introduction of the external benchmark-based lending rate (EBLR)⁹. Figure 10 shows the weighted average lending rate (WALR) on outstanding and fresh loans along with the repo rate. RBI eased the monetary policy starting from February 2019. Cumulatively, the period from February 2019 to April 2022 witnessed an easing of the repo rate by 250bps. During the same period, the WALR on fresh loans was reduced from 9.8% to 7.51% in April 2022—a reduction of 229bps. The transmission of the policy repo rate cuts to the WALR on outstanding loans was 150bps during this easing cycle.

Between May 2022 and February 2023, the RBI hiked the repo rate by a cumulative 250bps between May 2022 and February 2023. In response, the WALR on fresh loans increased from 7.86% to 9.24% in the same period—an increase of 138bps. The increase in the WALR on outstanding loans was relatively shallower at around 88bps during this period.

Thus, we find that there has been a fair amount of monetary policy transmission to bank lending rates during the IT period. However, it is worth noting that in the post-Covid period, despite the persistent monetary tightening by the RBI and the concomitant increase in WALR by the banks, non-food credit growth continued to be robust. During the period from January

2022 to June 2024, non-food bank credit grew at an average rate of 15%. much higher than the pre-pandemic period (2017-2019) when despite monetary easing, non-food credit barely grew by 10%.

**Figure 10 Weighted average lending rate
Outstanding rupee loans**



Note: Figure shows the weighted average lending rate (WALR) on outstanding and fresh loans along with the repo rate. Figure shows the pace of transmission of the policy rate changes to the lending rate during the easing (from February 2019 till April 2022) and the tightening cycle (from May 2022 to February 2023).

Source: CMIE Economic Outlook

It is also worth noting, that despite RBI's rate hikes from 2022 onward, retail bank credit has grown very sharply at an average rate of 25% (from September 2022 to August 2024). This raises questions about how effective monetary policy has been in dampening credit growth and hence aggregate demand.

Figure 11 Weighted average domestic term deposit rate

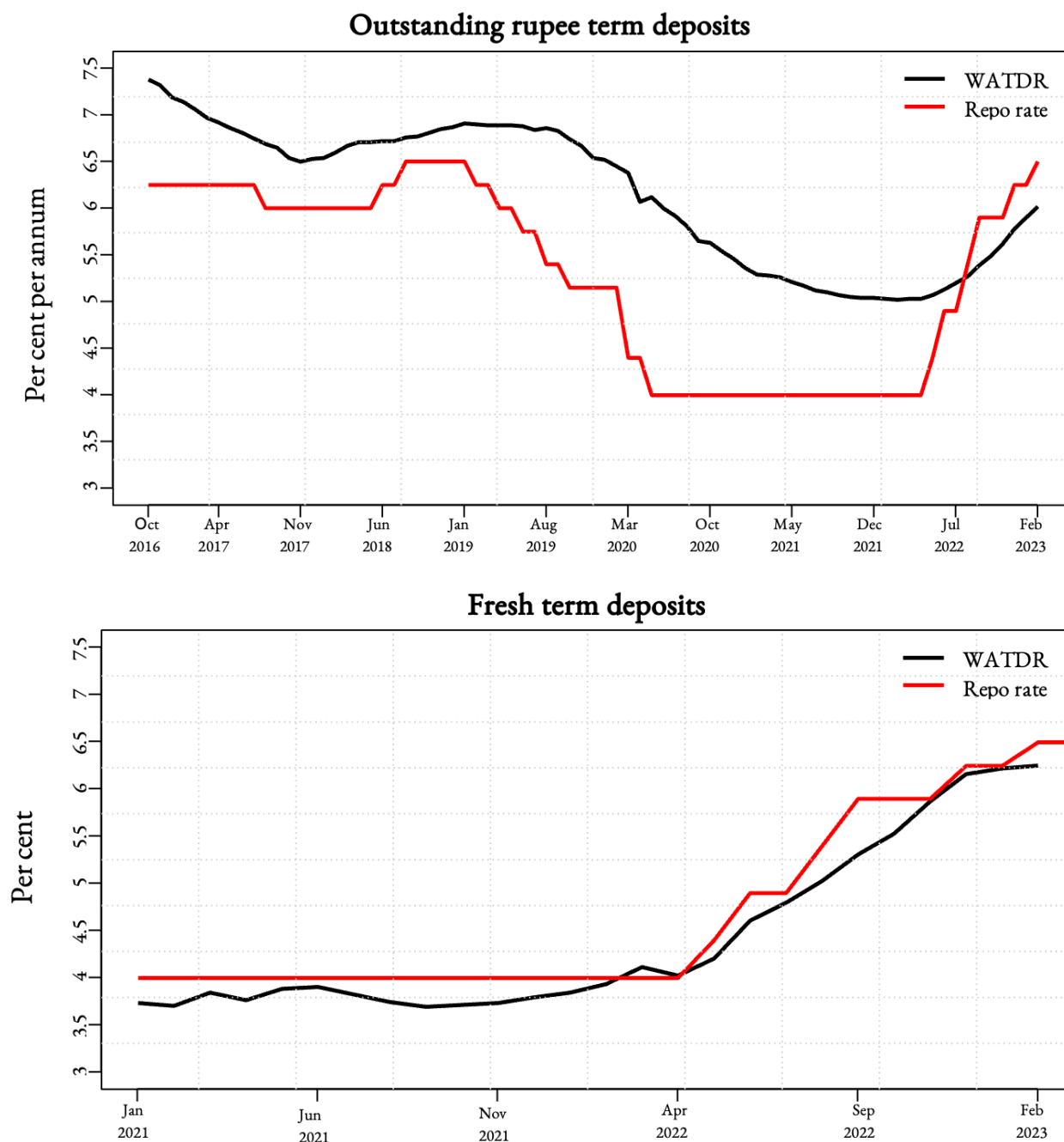


Figure shows the weighted average term deposit rate (WATDR) on outstanding and fresh deposits along with the repo rate. Data on WATDR on fresh deposits is available from January 2021. The figure shows the pace of transmission to the deposit rates during the easing and the tightening phase.

Source: CMIE Economic Outlook

Figure 11 shows the weighted average domestic term deposit rate on outstanding and fresh deposits. Due to lack of data, weighted average domestic term deposit rate starts from January 2021. During the easing phase, the rate on outstanding deposits fell by 187bps (from 6.9% in February 2019 to 5.03% in April 2022). But the increase in deposit rate in response to the hike in repo rate was shallower at 99bps (from 5.03% in April 2022 to 6.02% in February 2023). It may be argued that the transmission to deposit rate continued even after the pause in rate hike.

While the transmission through the bank channel has seemingly improved in the recent period, there are several factors that could impede the transmission. Monetary policy transmission through bank credit channel hinges upon the health of the banks' balance-sheets. During the pre-Covid IT period, balance sheet stress in the banking sector significantly hampered transmission, thereby lowering credit growth even when the RBI lowered the policy rate. In the post-Covid period, bank balance sheets have improved. However, in recent times, banks' net interest margins (NIM) have come under pressure because of sluggish growth in deposits that have not been able to keep pace with the strong growth in credit. If the squeeze in the NIMs continue, especially as the RBI starts lowering the repo rate, then monetary transmission through bank lending channel could get hampered. Bank deposits have been facing stiff competition from mutual funds and equity investments by households. This might make the banks hesitant to lower the interest rates on deposits even if RBI embarks on monetary easing from 2025 onward.

6.2 Transmission through the bond market

A robust and liquid government bond market plays a crucial role in ensuring the effective transmission of changes in short-term policy rates across the yield curve. Typically, changes in the central bank's policy rate are immediately reflected in the shorter end of the curve, while longer-term yields are more sensitive to expectations of future rate movements, which are themselves influenced by projected inflation trends.

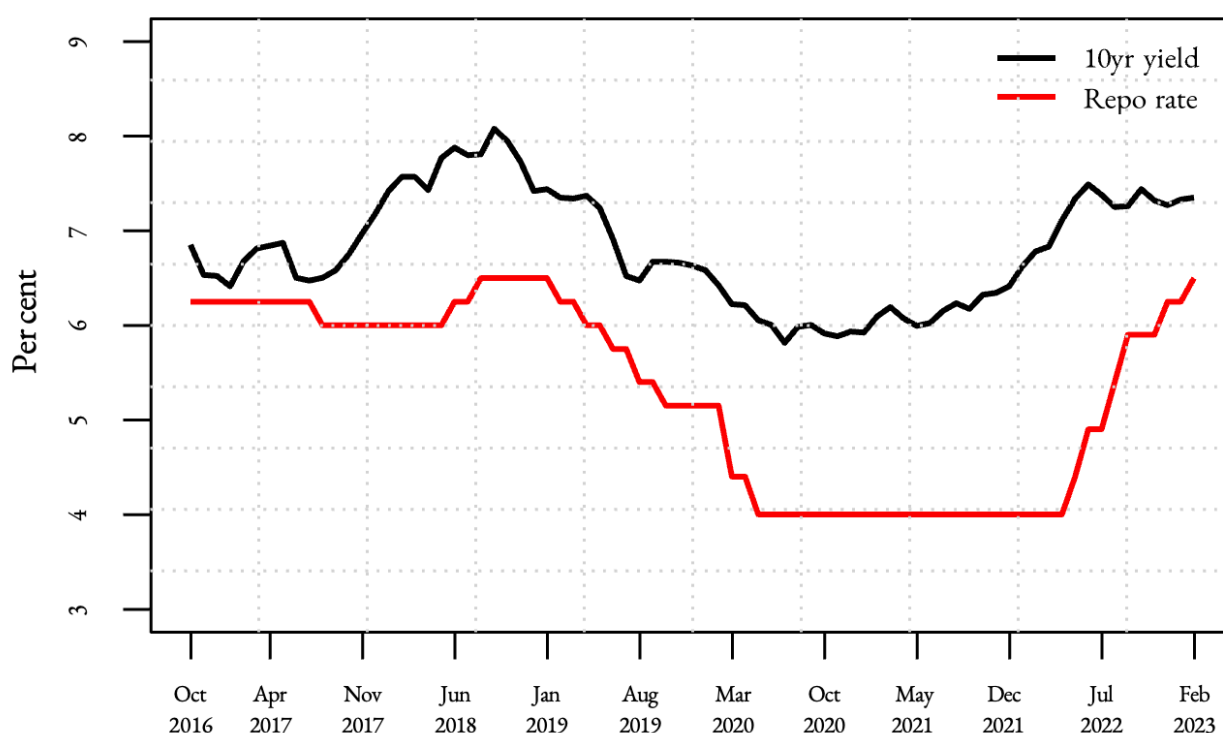
In the case of India, data reveals that while short-term money market rates and yields on short-maturity G-Secs react swiftly and almost in lockstep with changes in the repo rate, the transmission to medium- and long-term G-Sec yields has been considerably more muted and incomplete. This transmission is critical, as the yield curve serves as a benchmark for pricing securities in the corporate debt market and a host of other assets. For monetary policy to be effective, changes in the repo rate must translate into corresponding shifts in the borrowing costs of the private sector. However, any intervention by the RBI to manage the government's borrowing costs can undermine the strength of this transmission, particularly for medium and long-term G-Secs. Recent evidence suggests that bond market transmission has been less effective than intended.

For instance, between May 2022 and February 2023, the RBI raised the repo rate by 250 bps, but the yield on the 10-year G-Sec increased by only 24 bps. The average 10-year yield stood at 7.11% in April 2022, rising to only 7.35% by the end of the tightening cycle in February 2023. Notably, the 10-year yield experienced sharp declines during August and September, even amid tightening (Figure 12).

A useful metric for assessing transmission strength is the term premium, which measures the spread between short- and long-term yields. In India, this is often calculated as the difference between the yield on a 10-year G-Sec and a 1-year G-Sec. During the monetary easing cycle before the pandemic, the 1-year yield dropped by 120bps, while the 10-year yield fell by a more modest 93bps, resulting in a widening of the term premium (Figure 13).

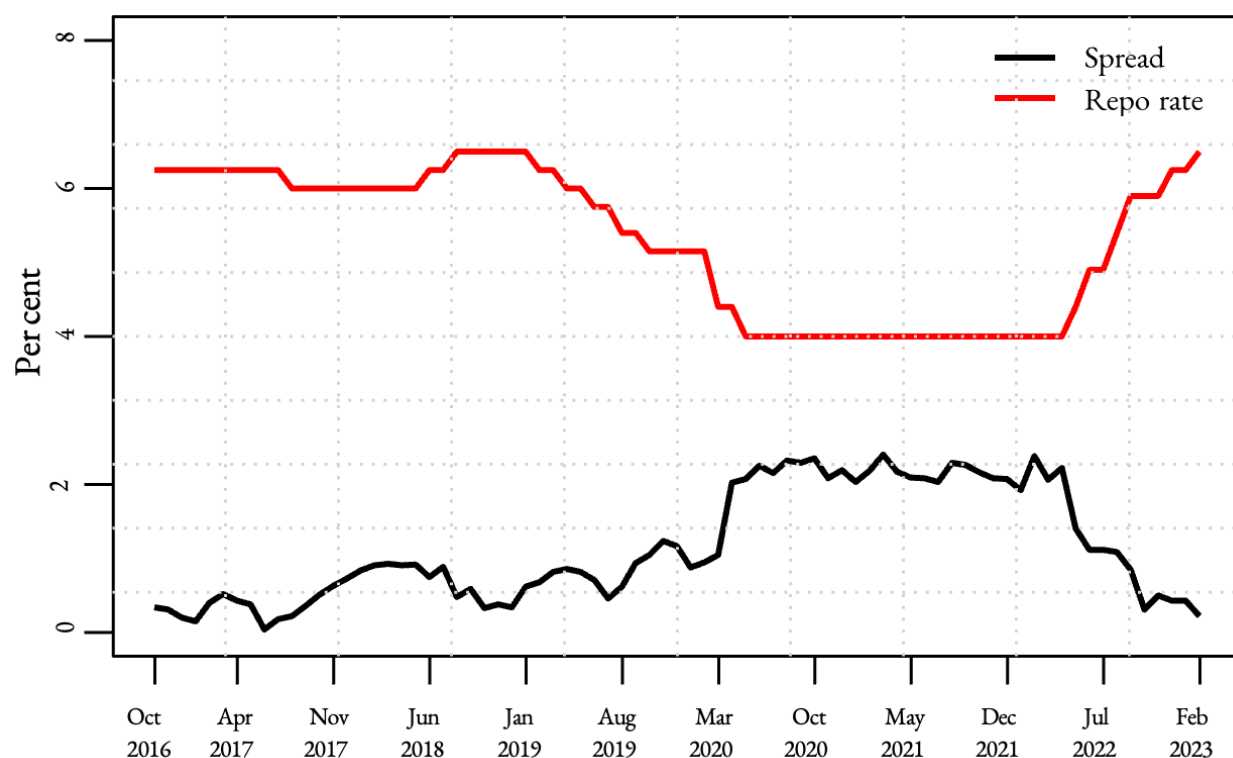
In contrast, during the tightening cycle from May 2022 to August 2024, the term premium remained subdued, averaging between 10 and 20bps. Despite consistent rate hikes and the RBI signalling further tightening, the yield curve remained largely flat, and in some instances, even inverted, suggesting expectations of rate cuts rather than increases—contrary to standard economic theory. One possible explanation is the RBI’s active purchasing of G-Secs in the secondary market, aimed at keeping long-term yields low and thereby reducing the government’s borrowing costs. This intervention may have dampened the steepening of the yield curve, even as rates rose.

Figure 12 10-year G-sec yield



Note: Figure shows the trajectory of the 10-year government bond yield along with the policy repo rate. It shows the monetary transmission to the 10-year government bond yield during the easing and the tightening phases.

Source: CMIE Economic Outlook

Figure 13 Spread of 10 years G-sec over 1 year G-sec

Note: Figure shows the spread of the 10-year government bond yield and the one-year government bond yield along with the repo rate. It shows the transmission of the policy rate changes to the spread, also referred to as the term premium.

Source: CMIE Economic Outlook

7. Conclusion

In this study, we undertake a comprehensive analysis of the inflation targeting (IT) regime in India, and identify persistent challenges, particularly in the context of the Impossible Trilemma.

While India became an IT country from 2015 onward on a de-jure basis, an effective and genuine implementation of IT in a de-facto manner requires two crucial actors: moving away from a pegged exchange rate to a more floating exchange rate and establishing a separate public debt management agency so that there is no conflict between the RBI's role as an IT central bank and as a debt manager for the government. With every passing year India is becoming more financially integrated into the global economy which in turn is intensifying pressures on the INR-USD exchange rate owing to fluctuating capital flows. A successful IT regime requires the RBI to step away from intervening in the currency markets and instead opt for a combination of open capital account, independent monetary policy and flexible exchange rate, as prescribed by the Impossible Trilemma doctrine.

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Notes

¹ Under the IT framework, the RBI is legally mandated to achieve a Consumer Price Index (CPI) inflation rate of 4%, with a tolerance band of $\pm 2\%$. The primary policy instrument for meeting this target is the repo rate, which represents the interest rate at which the RBI provides short-term loans to banks. This rate is determined by a six-member Monetary Policy Committee (MPC) that evaluates both global and domestic economic conditions, along with forecasts for domestic inflation and GDP growth.

² It is interesting to note in this context that the PDMA Bill of 2015 was introduced at the same time when the government and the RBI signed the Monetary Policy Framework Agreement (MPFA) that introduced IT for the first time in India but this bill was not enacted.

³ See: <https://www.indiabudget.gov.in/budget2016-2017/ub2016-17/fb/bill.pdf>.

⁴ See [Hutchison et al. \(2012\)](#), [Aizenman and Sengupta \(2013\)](#), [Sengupta \(2016\)](#), and [Sengupta and Gupta \(2019\)](#) among others

⁵ See (RBI, 2000; Tarapore, 2006; RBI, 2014)

⁶ See, <https://pib.gov.in/newsite/printrelease.aspx?relid=151264>

⁷ See [Patnaik and Pandey \(2020b\)](#) for a detailed meeting by meeting discussion on voting patterns of the members of the first MPC.

⁸ The new CPI series (CPI Combined) with base year 2011-12 is available from January 2011. The inflation series expressed as year-on-year percentage change in the CPI index is thus available from January 2012.

⁹ The RBI had asked banks to link all new floating rate retail loans and floating rate loans to micro and small enterprises (MSEs) to the policy repo rate or 3-month T-bill rate or 6-month T-bill rate or any other benchmark market interest rate published by the Financial Benchmarks India Private Limited (FBIL) from October 1, 2019.