Dynamic Landscape of Monetary Policy Communication in India

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Communication has evolved as an effective monetary policy tool for reducing surprise elements and anchoring expectations of economic agents. This article explores the dynamic landscape of monetary policy communication in India, encompassing two recent crisis events, viz., the Covid-19 pandemic and geopolitical conflict in Ukraine. The relative emphasis on specific topics in monetary policy meetings varied in response to changing economic conditions. The tone of communication on inflation, derived using a customised dictionary, is found to be significant in shaping the market expectations. This impact is particularly evident for medium-term overnight indexed swap (OIS) rates. The influence of communication is also observed to be higher during tightening phase.

Introduction

In an era marked by dynamic shifts in monetary policy frameworks, the communication landscape of central banks has seen a noticeable change in recent years. Acknowledging the crucial role of communication in complementing policy decisions, it is now considered as a fundamental pillar of modern day policymaking, enhancing overall policy efficacy. As Blinder (2018) aptly puts it, "*communication has morphed from a facilitator of monetary policy to a new policy instrument in its own right*". This shift reflects a more transparent and forward-looking approach, a departure from the opacity that characterised policymaking in earlier times.

Central bank communication is guided by three primary objectives *viz.*, inform, explain and influence (Benchimol *et al.*, 2021). By explicitly stating the policy objectives and rationale behind decisions along with near and medium-term outlook, central banks foster transparency. Clear communication enables policymakers to convey more effectively the changing circumstances, challenges and risks, and policy intentions. Through carefully crafted messages, central banks aim at reducing uncertainty and surprise elements, keeping markets well-informed and anchor their expectations. The effectiveness of such measures is contingent upon credibility of central banks, earned through prudent actions and subtle communication over a period of time. In modern day policymaking, it is important that along with decisions, the context of decision making (including the underlying conditions and uncertainty) is also shared with wider audience for their understanding (Rao 2024; and Lagarde 2023).

Addressing a wide spectrum of audience in today's dynamic world requires a nuanced approach to communication that can adapt and reflect changing circumstances. Its relevance becomes more pertinent during crisis episodes, when traditional policy scope may be constrained and unconventional measures are undertaken. Effectively explaining policy measures and setting the right expectations during such uncertain times requires careful deliberation, precision and expertise.

Communication by policymakers provides signals on emerging economic and financial conditions and studies suggest that such information can influence public, economic agents, financial markets and macroeconomic aggregates (Goyal and Parab 2021; Hansen *et al.*, 2019; and Blinder *et al.*, 2008).

Communication has been well integrated into Reserve Bank's policy framework and follows a holistic approach.[1] In addition to promoting transparency, it also lays emphasis on the elements of guidance, learning and listening (Subbarao 2011). The monetary policy framework in India has evolved in tune with the changing requirements of economic and financial

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[1] RBI follows two-way communication, (i) from RBI to public, markets and media, and (ii) regular consultation with analysts, economists, bankers, academicians, industry representatives *etc.*

development of the country. Adoption of flexible inflation targeting (FIT) framework and constitution of monetary policy committee (MPC) in 2016 has marked a new regime of monetary policymaking. Along with this, emphasis on communication has increased further in order to enhance transparency and conditioning the expectations (Das 2022a).

Monetary policy communication by RBI includes a variety of tools and communication channels, *viz.*, MPC resolutions and minutes, Governor's statements, press conferences, Monetary Policy Report, speeches and media interactions. These endeavours indicate dedicated efforts in strengthening communication, so as to guide and steer the expectations of households and financial markets, and align them with broader policy objectives.

In the recent period, Covid-19 pandemic caused unprecedented shocks to the Indian economy. These got further aggravated due to transmission of global price pressures to domestic inflation, as a result of Russia-Ukraine conflict in 2022. Providing confidence to the public and markets during such periods of heightened uncertainties and turbulence became more challenging, necessitating a well-balanced approach of communication. As outlined by RBI Governor Shri Shaktikanta Das, "*Monetary policy is not merely a science where we tweak some instrument to achieve an objective. It is also an art of creating new instruments and taking policy calls in response to anticipated and evolving challenges and communicating them with prescience and clarity, especially during crisis times. Decisiveness, timing and communication are key to effective monetary policy*" (Das 2022a).

As communication strategy continues to evolve, assessment of its effectiveness becomes much desirable and highly valuable. Policy communication is complex and its evaluation is an inherently challenging task. Despite this, it has gained traction in the recent period, as indicated by the increasing empirical literature in this domain. While a significant portion of studies relates to advanced economies, research on emerging market economies has also been increasing (Ahokpossi *et al.*, 2020; and Luangaram and Wongwachara 2017). Multiple dimensions of communication are being examined, including linguistic complexity, sentiment analysis, and its impact on markets and economic agents.

This study contributes to this fast-growing domain, focussing on monetary policy communication in India, where a few empirical studies have been published till date. The period beginning with the new regime of monetary policy making (FIT), starting with the first meeting of MPC in October 2016 is considered in the study. Taking a holistic approach, two key aspects are analysed. The first aspect relates to how the contours of communication have shifted with evolving economic conditions. This is carried out in terms of topics discussed in MPC meetings and their prevalence over time. The second aspect focuses on sentiment or tone expressed in MPC resolutions, tracking its evolution, and assessing its influence on the movement of interest rates in financial markets.

The rest of the article is structured as follows. Section II presents a brief review of the relevant literature, focussing more on the Indian context. In Section III, approach of topic modelling and empirical results are presented. Section IV discusses the methodology of quantification of communication tone and modelling framework for analysing communication impact on financial markets, along with empirical results. Section V presents concluding remarks.

II. Review of Literature

Central bank communication and its empirical examination has received significant attention in recent times, likely attributed to two major factors, *viz.*, growing recognition of communication as a monetary policy tool in its own capacity and increased accessibility of textual analytical methods. This study contributes to the growing literature in the Indian context and examines two aspects, (i) focus of MPC deliberations on multiple topics and their evolution, and (ii) role of communication in influencing market behaviour. A concise review of existing studies related to these aspects is provided in following paragraphs.

The first aspect has been examined in detail using computational linguistic methods, particularly through topic modelling. The studies find that monetary policy deliberations are primarily centred on core topics such as inflation, economic growth, policy decisions, market dynamics and global developments. The relative emphasis on these topics varies and evolves in response to emerging conditions (Benchimol *et al.*, 2021; Luangaram and Wongwachara 2017; and Hansen and McMahon 2016).

The second aspect, which explores the impact of communication on movements in key interest rates of financial markets, has been studied extensively. Initially, the raw textual communication is processed and transformed into quantifiable terms, which is then utilised as an indicator in the modelling framework to examine the impact on markets. Research findings suggest that sentiment or tone of narrative communication plays a crucial role in guiding the markets and anchoring their expectations (Bouscasse *et al.*, 2023; Hansen *et al.*, 2019; Hubert and Labondance 2019; and Blinder *et al.*, 2008).

Empirical studies on central bank communication in the Indian context are gaining traction in the recent period. Mathur and Sengupta (2019) find that even though monetary policy communication is linguistically complex, the length of policy statements has decreased and readability has improved over time. Samanta and Kumari (2021) quantify the degree of monetary policy transparency in India and find that transparency has enhanced progressively in multiple aspects. It increased substantially after adoption of FIT, enabling the anchoring of inflation expectations. Patra *et al.* (2023) examines the role of forward guidance and finds that it has significant impact on long term interest rate expectations, although its effectiveness diminishes during tightening phase.

Market reaction to monetary policy is examined in detail in Ahmed *et al.* (2022) and they find that communication by the Reserve Bank of India, especially the forward guidance element was instrumental in reducing uncertainty and guiding financial markets during the pandemic. John *et al.* (2023) also observe that monetary policy surprises have been rare in the recent period and communication has been effective in anchoring market expectations.

The aforesaid studies are significant as they critically evaluate the role of communication on financial markets; however, they concentrate on quantitative policy rate decisions. The approach in the current study differs slightly by quantifying the tone of narrative communication in bi-monthly MPC resolutions and subsequently analysing its influence on market behaviour, in addition to examining the impact of rate decisions.

Two studies that are closely related to current research are Goyal and Parab (2021) and Mahambre and Pathak (2021). Goyal and Parab (2021) examine the influence of quantitative and qualitative communication on inflation expectations of professional forecasters. Using a sentiment dictionary, they quantify the qualitative communication and observe that its impact has increased since October 2016, following the adoption of FIT and constitution of MPC. Mahambre and Pathak (2021) analyse the minutes of MPC meetings and identify differences in communication between internal and external members, in terms of their emphasis on inflation and growth topics and sentiments. Mishra and Aastha (2023) analyse Monetary Policy Report (MPR) published by RBI on half-yearly basis in terms of readability and polarity.

Patra (2022 and 2023) highlights how monetary policy communication is being assessed internally within RBI, across multiple dimensions including length and readability of monetary policy statements, sentiment analysis of statements of individual MPC members and their overall synergy, and media reception of speeches delivered on multiple occasions.

Taking motivation from international and India-specific studies, this paper attempts to analyse the MPC resolutions of the Reserve Bank. It examines shifts in monetary policy communication landscape, encompassing two significant crisis events *viz.*, the Covid pandemic and geopolitical conflict in Ukraine. Advanced natural language processing (NLP) methods are used to carry out topic modelling and communication tone extraction, details of which are presented in the subsequent sections.

III. Topic Modelling and Topic Evolution

In the monetary policy space in India, the deliberations in MPC meetings primarily focus on key topics including inflation, economic activity, policy decisions. It would be interesting to examine how the focus on these topics shifted during the last couple of years, and if any new topics emerged as the economic and financial conditions evolved and new risk factors come to the shore. Bi-monthly MPC resolutions have been considered for the analysis.

Topic modelling technique is used for identifying the topics and their respective proportions during the study period. Since the text is raw and unstructured, it needs to be pre-processed suitably before topic modelling. Latent dirichlet allocation (LDA) is an unsupervised machine learning algorithm and well established method for topic modelling in empirical studies (Benchimol *et al.*, 2021; and Hansen and McMahon 2016).

Underlying concept of LDA is intuitive *i.e.*, each document is a mixture of various topics and each topic is a mixture of various words/ terms. The advantage of this method is that model output is based entirely on the textual content and word frequency and co-occurrence in the documents. It creates groups of words, which are then labelled as a particular topic based on the primary theme represented by the frequently occurring words.

Subsequently, topic prevalence is derived in multiple steps as follows. It can provide information on how the focus on a topic changes, compared to other topics during the same time period and across different time periods as well. Individual paragraph of MPC resolutions is considered as a document for topic modelling.

Share of topic i in paragraph j of period t = $TS_{i,j|t}$ … (1)

A topic which has highest share, is assigned as the final topic for the specific paragraph, as below. This step is crucial as each topic gets a non-zero value of probability in each document.

$$FT_{j|t} = i, \text{ for which } TS_{i,j|t} = \max_i (TS_{i,j|t}) \quad \dots (2)$$

All paragraphs with same final topic are counted and the proportion during a particular period is derived, as below:

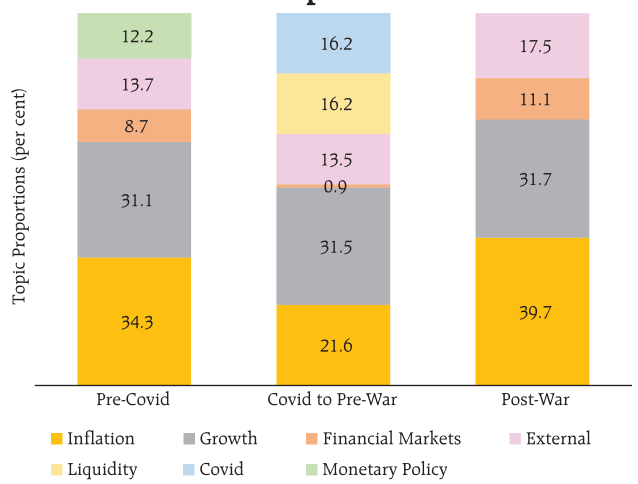
$$TP_{i|t} = \frac{\sum_{j=1}^{n} FT_{j|t}}{n} * 100 \quad \dots (3)$$

The study period was categorised into three sub-periods and topic modelling was carried out separately for each sub-period to capture the detailed topics, some of which may be lost if the entire study period is used together. October 2016 to February 2020 has been defined as pre-Covid period, while March 2020 to February 2022 has been defined as Covid and pre-war period and March 2022 to August 2024 as post-war period.

Many key topics emerged, which were grouped into seven main topics to facilitate comparison across time periods, *viz.*, inflation, growth, monetary policy, financial markets, external sector, liquidity and Covid. An illustration of topics in terms of word clouds is provided in Annex I. The interplay of words even for the same topic shows how the different dimensions were discussed.

Topic modelling results show that emphasis of communication varied and evolved in line with the

Chart 1: Topic Evolution



Note: For the Covid to Pre-War period, monetary policy and growth topics have been combined, as they were discussed together. For the Post-War period, monetary policy and inflation topics have been combined.
Sources: RBI; and Authors' estimate.

prevailing conditions, as reflected in the relative share of each topic for each period (as per methodology outlined earlier in equations 1 to 3). During pre-Covid period, inflation remained the central topic of discussion, followed by growth (Chart 1).

The Covid phase during 2020 and 2021 impacted the economy adversely and MPC deliberations focussed on growth over inflation, as reflected in higher topic proportions. During this period, Covid related concerns and liquidity topics also received attention. Several liquidity augmenting measures, including conventional and unconventional, were taken by RBI during this period, to provide necessary stimulus to bring the economy back on track. However, most of the measures were rolled out with defined terminal dates, instead of being open ended. Such prudent and calibrated approach helped to anchor market expectations and restoring confidence (Das 2022b).

As the pandemic started to slowly wean off and the economy was seemingly on recovery path, the beginning of Russia-Ukraine war in 2022 posed another major challenge for the world. The global shocks, emanating from food, energy and other commodity prices, aggravated by supply disruptions, transmitted to the domestic economy and inflationary pressures in India started to build-up. Local factors such as weather shocks and recovery of domestic demand put further pressures and inflation became elevated (Das 2023a). The resultant price pressures shaped the deliberations in the subsequent MPC meetings, and inflation returned as the core topic. Focus on external linkages was also noticeably higher during this period. Repo rate tightening began in May 2022. Policy stance also shifted from being accommodative to withdrawal of accommodation[2].

In recent times, economic growth is showing resilience on account of domestic demand and consumption. Overall headline inflation has moderated; however, risks continue to linger due to elevated and volatile food prices. In such a scenario, prioritising inflation and aligning it to the defined target on a durable basis remains of utmost priority for monetary policy. Such statements convey a clear and significant message to stakeholders.

IV. Narrative Communication and its Impact on Financial Markets

The approach of quantification of communication tone and modelling framework for analysing its impact on financial markets is described below, followed by empirical results subsequently.

IV.1 Quantification of Communication Tone

Considering the specific nature and complexity of monetary policy, extraction of communication sentiment or tone is a specific task. Quantification of communication tone from textual policy documents is generally based on a customised dictionary, with words representing semantic orientation or polarity. The crucial aspect is that the dictionary should be able to capture the subtle nuances of policy communication.

Taking inspiration from relevant literature studies in monetary policy context, particularly the widely

[2] The stance shifted to neutral in October 2024.

used Apel and Blix Grimaldi (2012), a customised dictionary suitable for Indian context is developed. As communication style and choice of words may vary for different central banks, using a tailor-made dictionary for India may be useful in capturing the nuances and dynamics of communication. The dictionary of words is based on the corpus of MPC resolution documents collected for the study period and domain understanding of working at the central bank.

Delving deeper, tone of communication on inflation and growth is extracted separately, which is not usually seen in extant literature except for a few recent studies (Bouscasse *et al.*, 2023; and Gardener *et al.*, 2022). Detangling the sentiment holds significance and it can improve the understanding of how the markets perceive and react differently to communication on inflation and growth. The customised dictionary contains hawkish and dovish terms for inflation, and expansionary and contractionary terms for growth.[3] However, discussion in the subsequent paragraphs is in terms of optimistic/ positive and pessimistic/negative tone. Accordingly, for each MPC resolution, the communication tone is derived in a manner that it represents the net optimism on inflation and growth, as below:

$$MPC\_INF_t = \frac{1}{N}\sum_{i=1}^{N}\left(\frac{D_{it} - H_{it}}{D_{it} + H_{it}}\right) \quad \ldots (4)$$

$$MPC\_GR_t = \frac{1}{K}\sum_{j=1}^{K}\left(\frac{E_{jt} - C_{jt}}{E_{jt} + C_{jt}}\right) \quad \ldots (5)$$

where,

D_{it} is number of dovish words in i^{th} sentence in t^{th} period

H_{it} is number of hawkish words in i^{th} sentence in t^{th} period

E_{jt} is number of expansionary words in j^{th} sentence in t^{th} period

C_{jt} is number of contractionary words in j^{th} sentence in t^{th} period

i / j is identified as a sentence related primarily to inflation / growth, respectively.

Communication tone on inflation (MPC_INF_t) indicates net optimism and may become positive when inflation is perceived to be low and/or within target, and negative during high inflation scenario. On the contrary, communication tone on growth (MPC_GR_t) may become positive when economic growth is perceived to be robust, and negative otherwise. An overall tone ($MPC\_OVERALL_t$) is also derived using the average of tone on inflation and growth.

IV.2 Methodology – Impact of Communication on Financial Markets

Change in market interest rates may arise on account of change in policy repo rate, the change in stance and other communication by policymakers. Among the various interest rates prevailing in financial markets, OIS rates are used widely in international empirical literature to measure policy expectations of market participants. In the Indian context, a detailed discussion on OIS rate and its linkages with monetary policy can be found in Patra *et al.*, 2023 and John *et al.*, 2023. Accordingly, MIBOR-based OIS rates at different tenors are examined in the current study.

As the objective is to empirically assess the role of monetary policy communication and policy rate decisions, communication tone on inflation and growth, and the overall tone are taken as explanatory variables. The weighted average call money rate (WACR), the operating target of monetary policy, is also included in the analysis as it influences market rates.

Using an event study approach, where each monetary policy announcement day is considered as an event, the average of WACR and OIS rates have been computed for pre and post policy and their difference have been used for the analysis. A window

[3] The dictionary consists of approximately 600 words in original form (without stemming) and tone is defined in a contextual manner. Some words which may be optimistic in context of growth may be negative in case of inflation, *e.g.*, increase in manufacturing activity is considered expansionary / positive / optimistic, while increase in inflation is considered hawkish / negative / pessimistic sentiment.

of five days pre and post policy is considered to capture the impact of policy communication on OIS rates adequately[4]. Such event study based approach is essential to segregate the influence of monetary policy from other events which may influence markets (John *et al.*, 2023; Ahmed *et al.*, 2022; and Hubert and Labondance, 2019).

The modelling framework is described as below, using alternate specifications. OIS rate at different tenors are analysed, in order to examine the differential impact of change in *WACR* and communication tone at shorter to medium horizons.

$$\Delta OIS\_f_t = \alpha + \beta\, \Delta WACR_t + \varepsilon_t \quad \ldots (6)$$

$$\Delta OIS\_f_t = \alpha + \beta\, \Delta WACR_t + \gamma\, MPC\_OVERALL_t + \varepsilon_t \quad \ldots (7)$$

$$\Delta OIS\_f_t = \alpha + \beta\, \Delta WACR_t + \gamma\, MPC\_INF_t + \varepsilon_t \quad \ldots (8)$$

$$\Delta OIS\_f_t = \alpha + \beta\, \Delta WACR_t + \lambda\, MPC\_GR_t + \varepsilon_t \quad \ldots (9)$$

$$\Delta OIS\_f_t = \alpha + \beta\, \Delta WACR_t + \gamma\, MPC\_INF_t + \lambda\, MPC\_GR_t + \varepsilon_t \quad \ldots (10)$$

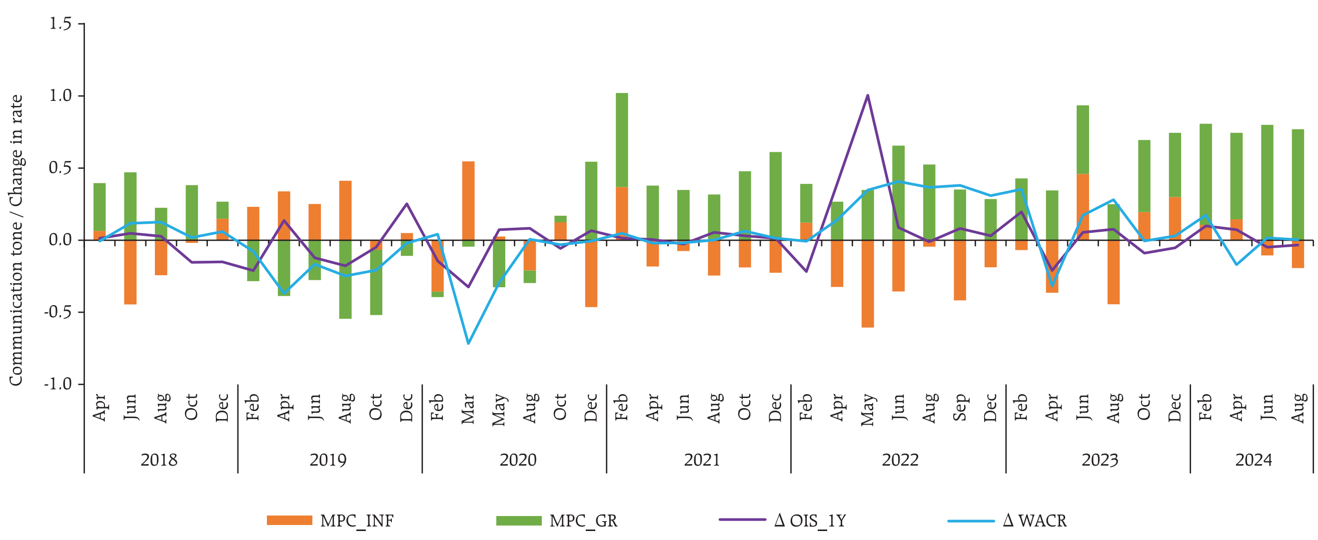
where, ΔOIS_f_t represents change in OIS rate pre and post policy in period t, with f indicating tenor of OIS rate (one month to one year), $\Delta WACR_t$ indicates change in *WACR* and MPC_INF_t and MPC_GR_t and $MPC\_OVERALL_t$ indicate communication tone on inflation, growth and overall tone, respectively.

IV.3 Empirical Results

Monetary policy communication tone on inflation (*MPC_INF*) evolved with time and resonated well with the policy cycle during the period April 2018 to August 2024. The tone was generally negative during the tightening period, and positive during the easing period. It turned increasingly negative during April-June 2022, as Ukraine crisis began to unfold and price pressures intensified (Chart 2).

The communication tone on growth (*MPC_GR*) moved in tandem with prevailing and emerging economic conditions. During the second half of 2019, when growth slowdown was observed, the outlook on growth turned negative. Further, when the Covid pandemic adversely affected the Indian economy, the tone became pessimistic. However, the tone became positive with the recovery and remained in the positive territory with minor fluctuations.

Chart 2: Communication and Interest Rate Movement



Sources: RBI; Financial Benchmarks India Pvt. Ltd. (FBIL); and Authors' estimate.

[4] While a quantitative change in repo rate may influence market rates immediately or next day, narrative communication by the RBI is discussed for longer duration and therefore it is considered appropriate to take a window of five days.

Table 1: Correlation

	ΔOIS_1M	ΔOIS_2M	ΔOIS_3M	ΔOIS_6M	ΔOIS_9M	ΔOIS_1Y
ΔWACR	0.74***	0.66***	0.61***	0.50***	0.49***	0.48***
MPC_INF	-0.50***	-0.49***	-0.50***	-0.47***	-0.46***	-0.46***
MPC_GR	0.27	0.20	0.19	0.16	0.15	0.16
MPC_Overall	-0.13	-0.19	-0.20	-0.21	-0.21	-0.20

Note: *** indicates statistical significance at 1 per cent level.
Sources: RBI; FBIL; and Authors' estimate.

During a period marked by high inflationary concerns, the likelihood of repo rate increase may result in an increase in the OIS rates. During such times, the inflationary concerns would be reflected in the negative tone in communication on inflation. Such underpinnings may result in an overall inverse relationship between OIS and communication tone on inflation.

It is observed that OIS rates tend to follow changes in repo rate in similar direction. However, OIS rates may not alter much if market has anticipated the increase or decrease in the policy rate in advance, reflecting alignment of expectations. Such changes may be significant in situations when repo rate changes are sharp and indicative of beginning of easing or tightening phase.[5]

Correlation analysis reaffirms the aforesaid theoretical underpinnings. It is observed that WACR and short-term OIS rates share a high positive correlation, while the correlation declines for longer tenor of OIS rates. The OIS rates are negatively correlated with communication tone on inflation, which is consistent throughout. On the contrary, the OIS rate is found to be weakly related to communication tone on growth, which is statistically insignificant. Further, the combined tone also does not show any significant correlation with change in OIS rate at any tenor. This also strengthens the idea that markets react to communication on inflation and growth in a different way, and a combined tone may not reveal the actual influence (Table 1).

Next, the relationship between OIS and WACR and communication tone is estimated by using the modelling framework described earlier. As the growth tone and overall tone were not significantly correlated with change in OIS rates, the regression model also did not yield any significant result (model results are not shown for brevity).

The empirical results of the model which uses change in WACR and communication tone on inflation (equation 8) is presented in Table 2. It is observed that change in WACR emanated as a major factor for change

Table 2: Impact of Communication on OIS Rates

	ΔOIS_1M	ΔOIS_2M	ΔOIS_3M	ΔOIS_6M	ΔOIS_9M	ΔOIS_1Y
ΔWACR	0.483***	0.372***	0.328***	0.287**	0.300**	0.302*
MPC_INF	-0.091	-0.103	-0.129	-0.178*	-0.194*	-0.211*
Constant	-0.026	-0.012	-0.008	-0.002	0.001	0.005
Observations	40	40	40	40	40	40
Adjusted R^2	0.54	0.44	0.39	0.27	0.26	0.25

Note: ***, ** and * indicates statistical significance at 1 per cent, 5 per cent and 10 per cent respectively. Serial correlation and heteroscedasticity was not observed in residuals of OLS regression model as per usual diagnostic tests (results not presented for brevity). Volatility clustering is generally observed in daily financial market data; however, no such clustering was detected in current study (data is transformed as per event study design).
Sources: RBI; FBIL; and Authors' estimate.

5 For example, 40 bps increase in repo rate in May 2022 after a long pause triggered hardening of OIS rates (100 bps increase in 1-year OIS rate), while inflation tone became substantially negative.

Table 3: Impact of Communication on OIS Rates – Different Policy Cycles

	ΔOIS_1M	ΔOIS_2M	ΔOIS_3M	ΔOIS_6M	ΔOIS_9M	ΔOIS_1Y
ΔWACR	0.384***	0.252**	0.201	0.127	0.154	0.139
MPC_INF_Easing	-0.235	-0.253	-0.246	-0.207	-0.187	-0.225
MPC_INF_Tightening	-0.230	-0.301**	-0.385**	-0.625***	-0.639***	-0.684***
MPC_INF_Neutral	-0.026	-0.020	-0.038	-0.054	-0.077	-0.083
Constant	-0.024	-0.012	-0.012	-0.020	-0.019	-0.015
Observations	40	40	40	40	40	40
Adjusted R^2	0.54	0.45	0.42	0.36	0.33	0.32

Note: ***, ** and * indicates statistical significance at 1 per cent, 5 per cent and 10 per cent respectively.
Sources: RBI; FBIL; and Authors' estimate.

in short-tenor OIS rate (1-3 month), with a significant and positive impact, though the impact progressively declines for longer tenor OIS rates[6].

As expected, the coefficient of communication tone on inflation is negative. Interestingly, the communication impact matters for the longer-tenor rates, as reflected in the statistically significant coefficient values. In addition, progressively higher impact is seen for higher tenors (6 months or more). It shows that policy communication matters more for medium-term OIS rates, which are significant from market expectation dimension.

In policy paradigm, the communication impact may not be symmetric, in the sense that market expectations may be conditioned differently during different policy cycles, depending on changing communication dynamics. The above model is re-estimated to examine the differential impact of monetary policy communication during the period April 2018 to August 2024. Inflation tone dummies are created depending on the policy regimes *viz.*, easing, tightening and status-quo.

Various insightful results emerge. First, the impact of WACR weakens substantially when inflation tone dummies are introduced, as compared to the model shown in Table 2. Second, the impact of policy communication on inflation is found to be statistically significant and substantially higher during the policy tightening phase, as compared to other phases. Further, the communication during the tightening phase matters for all tenors of OIS, except 1-month (Table 3).

V. Conclusion

The adoption of FIT framework and constitution of MPC in 2016 has marked a new regime of monetary policymaking in India. Along with this, emphasis on communication has increased further in order to enhance transparency and anchor expectations. Clear communication enables policymakers to convey more effectively the changing circumstances, risks and policy intentions. Providing confidence to the public and markets during uncertain periods poses challenges, necessitating a balanced and prudent approach of communication. An evaluation of communication effectiveness in supporting the policy goals has emerged as a key research topic, supported by emerging NLP techniques.

This article contributes to the fast-growing domain focussing on monetary policy communication in India and examines two key aspects - first, how the contours of communication have shifted in response to the evolving economic conditions and second, the evolution of sentiment or tone expressed in MPC resolution documents, and its influence on financial markets. Communication tone is based on a customised dictionary that can capture the nuances of policy communication in India.

[6] The results of the benchmark model with only WACR (equation 6) indicated that the coefficient of WACR follows similar progressively declining pattern, however, adjusted R-square was lower than combined model presented in Table 2 (results not presented for brevity).

The analysis shows that content and emphasis on topics varied in MPC deliberations, depending on emerging conditions and uncertainties due to unprecedented crisis episodes. Inflation remained as the central topic of discussion, followed by growth during the pre-pandemic period. This sequence reversed during the pandemic episodes, and liquidity and Covid topics also received attention. The geopolitical crisis in 2022 and the resultant inflationary pressures shaped subsequent MPC discussions with inflation returning as the core topic, while focus on external linkages also increased. The communication tone on inflation is found to play a significant role in shaping up market expectations, especially for medium-horizon OIS rates. The impact of communication is observed to be higher during the tightening phase.

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Annex I: Major Topics during Post-War Period[7]

Inflation: Three Topics

Growth: Two Topics

Financial Markets: One Topic

External Sector: One Topic

[7] Word clouds are based on stemmed words, which present root form of a word.