

Impact of RBI Repo Rate Changes on Stock Returns of Selected Indian Private and Public Banking Companies

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Abstract—The empirical research in the paper attempts to investigate the effect of the RBI repo rate changes on the monthly stock return of six chosen banks of India from the period of February 2015 to December 2025 (N = 131 per bank). The sample includes three public sector banks – SBI, Bank of Baroda, and PNB, along with three private sector banks namely HDFC, ICICI Bank, and Axis Bank chosen by their market capitalisation and representative of the sector. Utilising Pearson Correlation analysis and OLS regression, the findings reveal that there is no linear relationship between changes in repo rate and the monthly stock return in any of the six Indian banks at the 5% significance level (the p-value varies from 0.35 to 0.77; $R^2 < 0.01$ for all banks). Instead of interpreting the findings as an implication that monetary policies are irrelevant, this result indicates market efficiency to some extent and, more specifically, semi-strong since the anticipated decision-making processes are priced before official announcement. The sparseness of rate-changing months in the monthly sample adds up. However, when analysed in phases, the result shows that the policy stance affects the medium-term return performance of the banking sector, in which accommodative phases are associated with recovering periods, whereas the tightening phases vary by the ownership type and asset dynamics. In support of this, an additional survey was conducted with investors (N=29) regarding repo rates changes and found a 62%-point difference in awareness versus actual behavioural changes of 75.9% versus 13.8%. The paper highlights the need to use event study approach and panel techniques in the analysis instead of OLS.

Index Terms—Monetary Policy Transmission, RBI Repo Rate, Banking Stock Returns, Market Efficiency, Public and Private Sector Banks, India

I. INTRODUCTION

1.1 Background of the Study

Indeed, the empirical examination of the impact of monetary policy on stock returns and equity performance constitutes one of the major themes in finance research. In particular, the monetary transmission process is especially vivid in a bank-led financial system such as India where the policy rate (repo rate) – set by the Monetary Policy Committee (MPC) of the Reserve Bank of India – serves as the main tool for transmitting monetary impulses into liquidity in credit markets, costs of borrowing, and valuation. Movements in the repo rate affect the cost of bank funding, net interest margins, demand for loans, discount rates used in valuing projected earnings, and investors' expectations regarding the profitability of an industry as a whole. Hence, the stocks of banking companies become some of the most rate-sensitive financial instruments.

As was previously mentioned, India's monetary framework saw significant institutional change in the years preceding this study. First of all, the implementation of Flexible Inflation Targeting (FIT) as an official monetary policy strategy and establishment of a six-member Monetary Policy Committee (MPC) required to keep the Consumer Price Index (CPI) inflation stable at 4 percent in a ± 2 percent range provided additional rule-based transparency and predictable forward guidance from the MPC. Consequently, its minutes have been published, giving rise to rate decisions being highly anticipatable by institutional research and analysts. And, as explained above, this very feature entails a specific mechanism by which rate changes affect

market pricing and implies an absence of an announcement-month effect.

From an economic perspective, 2015-2025 spans one complete monetary cycle. In particular, during those ten years, the RBI's repo rate fell from 7.75 percent to an all-time low of 4.00 percent (a decrease of 375 bps) by May 2020, reversed course, rising by 250 bps between April 2022 and February 2023, and dropped back to 5.75 percent in December 2025. In parallel with this monetary policy course, Indian banking stocks experienced several significant events: NPA recognition crisis (2016-18), the COVID-19 market crash (March 2020), PNB fraud crisis (2018), post-pandemic recovery, and PSU bank re-rating (2022-24).

1.2 Statement of the Problem

Though there is clear understanding of the workings of the interest rate transmission channel, little empirical evidence exists regarding the influence of the repo rate change on the stock prices of banking stocks in India. Empirical works employing different methods, periods, and samples of banks give conflicting findings. Moreover, structural changes in the form of the adoption of MCLR to EBLR in the years after 2019, the parallel NPA cycle, the impact of the COVID-19 pandemic, and subsequent tightening have made it difficult to identify the impact of monetary policy actions on stock prices. It still remains to be tested empirically if public and private banks react differently to interest rate changes.

1.3 Significance and Scope

The importance of this research is multi-fold. First, from an academic perspective, the research adds to the small body of literature from India that studies the repo rate-equities nexus based on a 10-year monthly data set covering different policies and institutions. From the investor's perspective, the results of the study can help in determining whether there are any signals available to investors through monthly policy announcements regarding the placement of bank shares. From the perspective of policymakers, the results of the study have some policy relevance concerning the effectiveness of the signalling done by the MPC in the Indian equity market.

II. LITERATURE REVIEW

2.1 Monetary Policy Transmission: Channels and Speed

The interest rate channel is the most influential transmission mechanism by which central bank policy rates influence economic activity in the classical theory of monetary transmission. In the case of the Indian bank-dominated financial structure, the interest rate channel works through the response of lending and deposit rates in reaction to the policy rate changes. According to Das (2015), the pass-through of the repo policy rate into the commercial lending rate was significant yet slow, confirming the interest rate channel while revealing structural issues preventing full transmission. The impact of the liquidity environment on the speed of transmission of the signal to short-term money market rates was demonstrated by Goyal and Agarwal (2020), where the surplus or deficit liquidity state enhances signal transmission, whereas the neutrality position decreases it. Both works reveal asymmetry confirmed by BIS literature for emerging markets (Mohan, 2008), as the transmission process during the tightening cycle was quicker and more substantial than the easing one. The adoption of EBLR after 2019 increased the mechanical transmission efficiency compared to MCLR, while the structural delay from term deposits remained due to inertia.

2.2 Interest Rate Sensitivity of Equity Markets

The theoretical relationship between interest rates and stock prices follows the discount rate approach, which involves compression of the present value of anticipated earnings, and the earnings approach, which concerns the impact of higher rates on firms' performance and cost of borrowings. Campbell (1987) pioneered in empirically identifying the linkage between the term structure and excess stock returns. The initial systematic evidence on banks' rate sensitivity compared to other financial institutions was provided by Flannery (1981), and further strengthened by Akella and Chen (1990). Consistent findings can be noted across many markets where an international negative rate-return relationship holds for banks, albeit at varying levels of magnitude and significance (Joseph & Vezos, 2006; Kasman et al., 2011).

The Indian literature, however, appears to be inconclusive. According to Senthil Kumar (2013), a

significant negative relationship exists between interest rates hikes and returns of banking stocks in India, in line with classical valuation approaches. Muthukumaran and Somasundaram (2014) have confirmed differential rate sensitivity of banks' portfolios. Malik (2019) found a significant negative correlation between repo rates' increase and Indian market indices. Contrarily, according to Joseph et al. (2025), during periods of rapid economic growth, positive interest rates changes may go hand-in-hand with improvements in banking fundamentals, hence reducing the effect of discount rates' increase on their stocks. Muthukamu (2020), in turn, found private sector banks to have quicker and stronger stock response to monetary signals than public-sector banks, due to better institutional ownership and higher pricing flexibility.

2.3 Ownership, Asset Quality, and Structural Heterogeneity

Interest rate sensitivity of the banks sector is considerably influenced by factors such as institutional ownership and balance sheet condition. According to the findings of Borio, Gambacorta, & Hofmann (2017), monetary ease in low-rate environments adversely affects banks' profitability through lower NIMs; Demirgüç-Kunt & Huizinga (1999) found that margins were thinner for banks at persistently low rates across countries. According to Bhaumik et al. (2011), public and private banks in India responded differently to monetary policy changes in relation to the credit supply channel because public banks reacted more cautiously in terms of increasing credit supply due to balance sheet condition and social considerations. According to Karthik et al. (2024), the cycle of NPAs had been found to be a stronger determinant of PSU banks' stock performance than the monetary policy factors during 2016-2020 – which provides direct evidence about the weak correlations reported in the present study regarding the subsample before COVID-19. The results of Vora (2023) suggest that NIMs of private banks exhibited greater resilience against post-EBLR interest rate hikes since they had a relatively high percentage of floating-rate retail loans. According to Marisetty & Bindu (2025) – who examined the impact of the monetary tightening of 2022-23 on stock prices – the PSU banks re-rating had been driven by NPA

resolution and capital adequacy more than anything else.

2.4 Event Studies: Policy Announcements and Market Reactions

Market response analysis via event study methodology represents the benchmark approach towards quantifying reactions to the occurrence of policy events. While Kuttner (2001) demonstrated that only surprise changes in monetary policy have significant impact on the stock market in the US, meaning that expectations about decisions are already built into prices, Rigobon & Sack (2004) corroborated an endogeneity-corrected negative relation between unexpected monetary policy decisions and stock prices in the US. This evidence implies a benchmark expectation for the analysis of India's MPC era, as it is reasonable to expect that where rates are anticipated through forward guidance and analyst expectations, market reactions at the announcement-month will be weaker. As for India, Jose & Thekkethala (2015) identified significant abnormal returns around the period of the RBI's policy decisions, with surprising positively correlated stock reactions to rate hikes due to the signalling effect. According to Yalla, Jain & Bhattacharyya (2020), there is an elevated beta variance and significant short-window abnormal returns around MPC dates, which confirms prompt absorption of information. Chakravarty & Goel (2025) expanded research into post-policy period, discovering that implied direction of policy actions affect subsequent return momentum over the quarter. Mishra (2025) found that communication tone during the MPC process affects reaction of the banking stocks to short-window events independently of the rate change itself, highlighting the role of policy communication as a signal to the market. Finally, according to Jain (2025), banks exhibited heterogeneous responses to the 2022-23 monetary policy tightening period.

2.5 Synthesis

There are several findings that emerge from the literature: monetary policy transmission in India is indeed real but incomplete and one-sided; the connection between the interest rate and banking equity has sound theoretical foundations, but its relevance and sign are context-dependent, with their importance depending on the economic cycle,

institutional variables, and the choice of data frequency; the results of an event study reveal a reaction to surprise events, while the analysis using monthly averages mingles the expected and unexpected parts; and finally, the difference between public and private banks is indeed empirical and structural.

III. RESEARCH GAP, OBJECTIVES, AND HYPOTHESES

3.1 Research Gap

Several gaps can be identified in the extant literature. First, most Indian analyses use market-based indices for returns as opposed to individual bank return data that would show variance according to ownership and asset quality. Second, the period 2015-2025, which includes MPC formation, the switch from MCLR to EBLR, the NPA resolution phase, COVID-related emergency measures, and post-COVID normalization, has not yet been covered through one consistent monthly data set at the individual bank level. Third, although it would make sense to compare the PSU and private banks in terms of monetary policy effects, this has only rarely been done systematically in India. Lastly, while monetary policy effect studies have a behavioral dimension related to consumer reaction to rates, this is an uncharted area in India.

3.2 Research Questions

- (1) Is there any statistical relationship between the RBI repo rate and the monthly return on the stocks of selected banks of India between 2015 to 2025?
- (2) Are there differences in the sensitivity of private and public sector banks to fluctuations in the repo rate?
- (3) To what extent do individual investors incorporate the signals provided by the repo rate to invest in bank stocks?

3.3 Research Objectives

The primary objective is to examine the relationship between RBI repo rate changes and stock returns of selected Indian banking companies during 2015–2025. Specific objectives are:

- (1) to analyse the direction, magnitude, and statistical significance of the repo rate–return relationship;
- (2) to examine and explain differences in return sensitivity between public and private sector banks;

(3) to interpret the broader implications of monetary policy changes for banking sector equity performance; and

(4) to quantify the impact using OLS regression models and supplement findings with investor behavioural evidence.

3.4 Hypotheses

H₀: Changes in the RBI repo rate have no statistically significant effect on the stock returns of selected Indian banking companies during the period 2015–2025.

H₁: Changes in the RBI repo rate have a statistically significant effect on the stock returns of selected Indian banking companies during the period 2015–2025.

IV. RESEARCH METHODOLOGY

4.1 Research Design

This investigation is done using an explanatory, empirical, and quantitative research design. The methodology consists of four steps that include trend analysis of the policy rates and banking stocks price movement; characterising the return distribution of monthly return; correlation analysis between bivariate Pearson and correlation matrix of bank to bank; and finally, regression analysis between repo rate and return. Additional investor behaviour is obtained through the use of structured survey (N=29).

4.2 Data Sources and Study Period

Secondary data include:

- (a) Monthly closing prices for all six banks using archives from NSE and BSE;
- (b) RBI Policy Repo Rate using MPC announcements (www.rbi.org.in); and
- (c) Nifty Bank Index for benchmarking purposes.

Interpretation of bank-level financial ratios such as NIM and CAR is made using their annual reports. Primary data was gathered using a questionnaire through Google Forms. The duration of analysis is from January 2015 to December 2025, which provides N = 131 valid monthly observations per bank by calculating the percentage return on consecutive monthly closing prices.

4.3 Sample Selection

The six banks chosen using purposive sampling criteria include their market capitalization, consistency of data from 2015 to 2025, inclusion in Nifty Bank Index, and balanced representation within the sector. Sample banks in public sector banks: SBI, Bank of Baroda, PNB. Sample banks in private sector banks: HDFC Bank, ICICI Bank, Axis Bank. The six banks together constituted around 58-62% of total market capitalization of the entire banking sector under study.

4.4 Variables and Model Specification

The dependent variable is monthly stock return: $Return_{it} = [(P_{it} - P_{i,t-1}) / P_{i,t-1}] \times 100$, where P_{it} is the month-end closing price. The independent variable $\Delta RepoRate_t$ is the change in the policy repo rate between consecutive months in percentage points. Positive values indicate hikes; negative values indicate cuts; zero values, characterising approximately 80 percent of the sample, as the RBI changed rates in only approximately 26 of 131 months are a structurally important feature directly relevant to statistical interpretation. The OLS model estimated for each bank is:

$$Return_{it} = \alpha_i + \beta_i \cdot \Delta RepoRate_t + \epsilon_{it}$$

The significance of β_i is assessed via a two-tailed t-test at the 5 percent level (critical value $\approx \pm 1.979$ for 129 degrees of freedom). R^2 measures goodness of fit.

4.5 Statistical Tools

The techniques used for analysing the data were descriptive statistics (mean, standard deviation, minimum, maximum, skewness, excess kurtosis), trend analysis, Pearson correlation, inter-bank correlation analysis, OLS regression analysis, and phase-wise return analysis for the eight monetary policies regimes identified. These data analyses were done in MS-Excel. Survey primary data were analysed using frequency analysis and percentages.

V. DATA ANALYSIS AND HYPOTHESIS TESTING

5.1 Policy Rate Trajectory: 2015–2025

The repo rate of RBI completed a monetary policy cycle through a series of eight different cycles. Starting from 7.75 percent in January 2015, it was lowered by five times to 6.50 percent in April 2016 using FIT. After the neutral and moderate 50 bps

tightening in 2018, there came the longest ever rate cutting cycle due to COVID-19: the repo rate fell to an all-time low of 4.00 percent in May 2020. After staying at that level for 22 months, it was increased in one single year by an unprecedented 250 basis points to reach 6.50 percent by February 2023. This was the fastest tightening cycle in the study period. After remaining unchanged at this level for 23 months, the next cycle of cutting started in February 2025 and ended the decade at 5.75 percent. The unique characteristic of long holds with sudden moves where the change in rate happened only in about 20 percent of the months is what influenced the nature of the data series used.

Table 1: RBI Repo Rate Policy Phases — 2015–2025

Phase	Period	Start Rate	End Rate	Net Change	Actions
Easing Phase I	Feb 2015 –Apr 2016	7.75 %	6.50 %	-125 bps	5 cuts
Neutral / Hold	May 2016 –Jul 2017	6.50 %	6.00 %	-50 bps	2 cuts
Tightening Phase I	Aug 2017 –Oct 2018	6.00 %	6.50 %	+50 bps	2 hikes
Easing Phase II	Nov 2018 –May 2020	6.50 %	4.00 %	-250 bps	10 cuts
COVID Hold	Jun 2020 –Mar 2022	4.00 %	4.00 %	0 bps	Status quo
Tightening Phase II	Apr 2022 –Feb 2023	4.00 %	6.50 %	+250 bps	6 hikes
Prolonged Hold	Mar 2023 –Jan 2025	6.50 %	6.50 %	0 bps	Status quo

Phase	Period	Start Rate	End Rate	Net Change	Actions
Easing Phase III	Feb 2025 – Dec 2025	6.50 %	5.75 %	-75 bps	3 cuts

Note: Net change in basis points (bps) is the cumulative repo rate movement over each phase. Actions denotes the number of formal MPC rate revision decisions.

Source: Reserve Bank of India, Monetary Policy Committee Statements (2015–2025). Compiled in Microsoft Excel.

5.2 Banking Stock Price Trends: 2015–2025

There were clear differences in the price performance of private versus public sector banks, even taking into account interruptions in price paths. While both HDFC and ICICI Bank saw relatively stable upward price movements throughout the 2015-19 phase of easing policy, SBI, PNB, and BoB faced sharp declines in prices because of the NPA recognition cycle. The fall in PNB's stock price, which fell by more than 60% over nine months as a result of the fraud revelations at the company, shows how bank-specific shocks can overwhelm any monetary policy changes. All six companies were hit equally hard by the March 2020 market crash brought on by the pandemic. However, the recovery path took diverging directions, with HDFC Bank underperforming in 2021-23 due to HDFC merger uncertainty while the PSU banks saw a strong re-rating in 2022-24 on account of improved NPAs and capital adequacy rather than the prevailing monetary policy stance.

5.3 Descriptive Statistics of Monthly Returns

The descriptive statistics for monthly stock returns are shown in Table 2 below. The best performing stocks on a mean monthly return basis are ICICI Bank at 1.41%, followed by SBI at 1.25% and Axis Bank at 1.02%. The relatively poor performance of HDFC Bank is explained by the bank being involved in underperformance since 2021 to date due to the merger processes between HDFC and HDFC Bank. Public sector banks have performed well in general with the notable exception of PNB with an

exceptionally poor mean return of 0.43%, mainly attributed to the fraud incident of 2018.

The variance in the standard deviations between the two sectors is highly informative. PNB has the highest standard deviation of 9.66%, followed by BoB at 8.50% and then SBI at 7.94% as compared to the much smaller standard deviations of 5.41%, 5.86% and 6.22% for HDFC, Axis and ICICI banks respectively. The higher standard deviations in case of PSU banks is explained by earnings uncertainty and events in the market. All six series of returns exhibit high excess kurtosis.

Table 2: Descriptive Statistics of Monthly Stock Returns (%) — February 2015 to December 2025 (N = 131)

Bank	Sector	Mean (%)	Std Dev (%)	Min (%)	Max (%)	Kurtosis
SBI	Public	1.25	7.94	-25.71	49.02	13.23
Bank of Baroda	Public	0.63	8.50	-28.57	24.00	4.75
Punjab National Bank	Public	0.43	9.66	-32.14	28.00	3.92
HDFC Bank	Private	0.70	5.41	-27.02	10.87	13.70
ICICI Bank	Private	1.41	6.22	-37.08	18.60	10.88
Axis Bank	Private	1.02	5.86	-34.35	17.95	10.38

Note: Returns are percentage change in month-end closing prices. Kurtosis reported as excess kurtosis; positive values indicate leptokurtic (fat-tailed) distribution.

Source: NSE and BSE Historical Price Archives. Compiled in Microsoft Excel.

5.4 Correlation Analysis

Table 3 presents Pearson correlation coefficients between monthly repo rate changes and each bank's monthly return. Coefficients are uniformly weak, ranging from -0.069 (HDFC Bank) to +0.083 (Axis

Bank), with no value approaching significance at the 10 percent level. This result is structurally expected: the repo rate changed in only approximately 26 of 131 months, creating a near-constant independent variable ($\Delta RepoRate = 0$ in ~80% of observations) that necessarily attenuates any linear correlation with a continuously distributed return series. Market efficiency provides a complementary explanation: in India's MPC-era, anticipated rate decisions are pre-priced by institutional research desks before formal announcements, compressing measurable announcement-month effects.

The sign of the correlation pattern is meaningful despite being insignificant. PSU banks (such as SBI, BoB, and PNB) have positive correlations because of the overlapping of their tightening period and growth periods in the macroeconomy and PSU banks' business fundamentals. On the other hand, HDFC and ICICI have negative correlations, which are theoretically expected since their valuations depend on their net interest margins due to their superior fundamental quality. The inter-bank correlation matrix shows a high level of co-movement in the same sectors and some degree of cross-sectoral correlation (ranging between 0.49 and 0.80).

Table 3: Pearson Correlation — $\Delta Repo$ Rate vs. Monthly Banking Stock Returns (N = 131)

Bank	Sector	Pearson r	p-value	Significance
SBI	Public	0.0420	0.6337	NS
Bank of Baroda	Public	0.0793	0.3678	NS
Punjab National Bank	Public	0.0427	0.6279	NS
HDFC Bank	Private	-0.0685	0.4372	NS
ICICI Bank	Private	-0.0260	0.7682	NS
Axis Bank	Private	0.0829	0.3468	NS

Note: NS = Not Significant at 10% level. Two-tailed test. $\Delta RepoRate$ takes non-zero values in approximately 26 of 131 monthly observations.

Source: NSE/BSE Price Data and RBI Monetary Policy Statements. Computed in Microsoft Excel.

5.5 OLS Regression Results

Results from OLS regressions for all six banks are displayed in Table 4. None of the banks' coefficients of β are statistically significant at the 5 percent significance level, with p-values of between 0.35 and 0.77, clearly lying within the region of acceptance of the null hypothesis. The R^2 values are small (between 0.0007 and 0.0069), indicating that the variability in returns is not explained by changes in the repo rate.

Directional interpretation is nonetheless informative. HDFC Bank ($\beta = -2.33$) is the only bank with an unambiguously negative slope, consistent with the expected adverse NIM response to tightening for a high-multiple private bank. Bank of Baroda shows the largest positive β (4.24), reflecting the timing coincidence between the 2022 tightening cycle and BoB's most pronounced recovery phase; a confounding of institutional recovery with monetary tightening rather than evidence of genuine rate sensitivity. ICICI Bank's near-zero β (-1.02) and lowest R^2 (0.0007) confirm that its decade-long return profile was driven entirely by idiosyncratic institutional transformation, management succession, retail banking pivot, asset quality clean-up rather than by policy rate movements. The uniform failure to reject the null hypothesis reflects three compounding structural factors: market efficiency (anticipated decisions are pre-priced); data sparsity ($\Delta RepoRate \neq 0$ in only ~20% of months); and the dominance of idiosyncratic institutional factors over the monthly repo rate signal in explaining return variation.

Table 4: OLS Regression Results — Monthly Bank Return = $\alpha + \beta(\Delta Repo Rate) + \varepsilon$ (N = 131, Feb 2015–Dec 2025)

Bank	Sector	α	β	Std Err	t-Stat	p-value	R^2	Decision
SBI	Public	1.279	2.099	4.390	0.478	0.634	0.018	Fail to Reject Ho
Bank of Baroda	Public	0.695	4.240	4.666	0.909	0.368	0.063	Fail to Reject Ho
PNB	Public	0.469	2.596	5.301	0.490	0.628	0.018	Fail to

Bank	Sector	α	β	Std Err	t-Stat	p-value	R ²	Decision
								Reject Ho
HDFC Bank	Private	0.661	-2.332	3.016	-0.773	0.437	0.0047	Fail to Reject Ho
ICI CI Bank	Private	1.395	-1.018	3.432	-0.297	0.768	0.0007	Fail to Reject Ho
Axis Bank	Private	1.063	3.054	3.220	0.948	0.347	0.0069	Fail to Reject Ho

Note: Two-tailed t-test on β coefficient. Critical t-value at 5% with 129 df $\approx \pm 1.979$. NS = Not Significant at any conventional level.

Source: NSE/BSE Historical Price Data and RBI MPC Statements. OLS regression computed in Microsoft Excel.

5.6 Phase-Wise Return Analysis

The table below (Table 5) shows an analysis of the average monthly returns on the basis of three broad sub-periods. In the pre-COVID period (from February 2015 to December 2019), private sector banks had higher returns as HDFC Bank was top-performing with average monthly returns of 1.66%, while BoB and PNB had negative average monthly returns (-1.15% each), which were entirely due to the impact of NPA recognition cycle and the fraud event in 2018. This indicates that idiosyncratic institutional events had more relevance compared to monetary accommodation in the given period. On the other hand, during the COVID period (January 2020 to December 2021), there were clear reversals; SBI with 4.28%, ICICI with 2.52%, and Axis with 2.88% had higher average monthly returns due to base effect recovery from COVID period and financial sector re-rating. The negative average return for HDFC Bank (-1.07%) is mainly because of underperformance by the bank against its peer group from 2020 to 2022. Finally, during the post-COVID period (January 2022 to December 2025), all banks reported positive returns; the highest among them being PNB with an average of

2.91% as a consequence of PSU bank fundamental re-rating amidst a tightening cycle.

Table 5: Phase-Wise Average Monthly Returns (%) — 2015–2025

Bank	Sector	Pre-COVID (%)	COVID (%)	Post-COVID (%)	Full Period (%)	Best Phase
SBI	Public	0.48	4.28	1.81	1.25	COVID
Bank of Baroda	Public	-1.15	3.07	2.14	0.63	COVID
PNB	Public	-1.15	1.72	2.91	0.43	Post-COVID
HDFC Bank	Private	1.66	-1.07	1.00	0.70	Pre-COVID
ICICI Bank	Private	1.04	2.52	2.26	1.41	COVID
Axis Bank	Private	0.69	2.88	1.96	1.02	COVID

Note: Pre-COVID: Feb 2015–Dec 2019 (59 months). COVID: Jan 2020–Dec 2021 (24 months). Post-COVID: Jan 2022–Dec 2025 (48 months). Returns in percent.

Source: Computed from NSE/BSE Historical Stock Return Data using Microsoft Excel.

5.7 Investor Survey Findings

The additional survey data (N=29) represents the behavioural component that is missing in most literature written in India about monetary transmission mechanisms. Although 75.9% of respondents claim to be aware of repo rate announcements by the RBI, and 82.8% say that changes in the repo rates impact stock market movements, 13.8% claimed to be impacted themselves – the knowledge-action discrepancy being approximately 62%. The largest number of respondents (55.2%) indicated that they were uncertain whether changes in the repo rates would impact their decisions – as suggested by close-to-zero values of R² coefficients obtained during the

regression analysis. Interestingly, 41.4% of the respondents noted private sector banks as the quickest in reacting to changes in the repo rates, which aligns with theory and the direction of the negative β values of HDFC and ICICI banks. Thus, the findings obtained by the additional survey confirm the results received statistically through an independent methodology.

5.8 Hypothesis Testing Results

The outcomes of hypothesis testing are presented in Table 6. The null hypothesis is accepted for all six sampled banks, with the significance level at 5 percent. This common acceptance of the null hypothesis, combined with the correlation test results, the phase-wise approach, and the survey of behaviours, allows drawing the following conclusion: while monthly changes in the repo rate are unable to influence banking stocks at short periods of time in an observable linear way, their orientation remains relevant at medium-term horizons. In support of this conclusion, the survey of investors shows that the percentage of investors guided by changes in interest rates is only 13.8 percent.

Table 6: Hypothesis Testing Summary (N = 131 Monthly Observations, Feb 2015–Dec 2025)

Bank	Sector	P-value	Decision	Interpretation
SBI	Public	0.6337	Fail to Reject H_0	No significant linear relationship at 5% level
Bank of Baroda	Public	0.3678	Fail to Reject H_0	No significant linear relationship at 5% level
PNB	Public	0.6279	Fail to Reject H_0	No significant linear relationship at 5% level
HDFC Bank	Private	0.4372	Fail to Reject H_0	No significant linear relationship at 5% level
ICICI Bank	Private	0.7682	Fail to Reject H_0	No significant linear relationship at 5% level

Bank	Sector	P-value	Decision	Interpretation
Axis Bank	Private	0.3468	Fail to Reject H_0	No significant linear relationship at 5% level

Note: Decision rule: Reject H_0 if $p < 0.05$ (two-tailed). Critical t-value at 5% with 129 df $\approx \pm 1.979$. Source: Computed by Researcher using OLS regression in Microsoft Excel.

VI. ACHIEVEMENT OF RESEARCH OBJECTIVES

Objective 1: Analyse the direction, magnitude, and statistical significance of the repo rate–return relationship.

Achievement Status: Fully Achieved. Pearson correlations ranged from -0.069 (HDFC Bank) to $+0.083$ (Axis Bank). OLS β coefficients ranged from -2.33 (HDFC Bank) to $+4.24$ (Bank of Baroda). None achieved statistical significance (p-values: $0.35-0.77$; $R^2 < 0.01$ for all banks). The objective is fully met: direction, magnitude, and statistical status are precisely quantified for each of the six sampled banks. The result — failure to reject H_0 — is a substantive empirical finding interpreted through the market efficiency framework, not as evidence of monetary policy irrelevance.

Objective 2: Examine and explain differences in return sensitivity between public and private sector banks.

Achievement Status: Achieved with Qualification. The public sector banks had consistently positive β s; on the other hand, HDFC Bank and ICICI Bank had negative β s that followed theoretical expectations, whereas the β for Axis Bank was positive. Differences in statistical significance were not observed between the sectors. The more relevant comparison came from the phase-wise study, according to which PSU banks performed poorly in the NPA stress phase (2015-19) while leading in the post-COVID phase, and the private banks performed better in the pre-COVID accommodative phase. This difference in performance was driven by structural and governance factors and not directly due to differing sensitivities to changes in interest rates.

Objective 3: Interpret broader monetary policy transmission implications for Indian banking equity markets.

Achievement Status: Fully Achieved. This research concludes that while there is no relation between monthly changes in the repo rate and stock returns on banking stocks, the monetary policy position influences the environment of returns in the medium term. Based on the results of the analysis, it can be concluded that the approach of an event study with short announcement periods and a panel regression analysis, which includes both macroeconomic indicators and those pertaining to banks, is methodologically sounder in explaining the impact mechanism.

Objective 4: Quantify impact using OLS regression models.

Achievement Status: Fully Achieved. OLS regression was estimated independently for all six banks. Bank-specific intercepts (α), slope coefficients (β), standard errors, t-statistics, p-values, and R^2 are reported in Table 4. The objective is satisfied in full: precise sensitivity estimates with uncertainty measures are provided for each institution, enabling direct cross-bank and cross-sector comparison.

VII. FINDINGS, CONCLUSION, AND RECOMMENDATIONS

7.1 Major Findings

The key empirical result is that there is a lack of statistically significant correlation between the RBI repo rate changes and monthly returns on stocks for any of the six selected banks over the period 2015–2025, resulting in a uniformly rejected null hypothesis. R^2 being less than 0.01 for all banks implies that repo rate changes explain less than 1% of stock return variability. However, phase-wise results indicate that monetary policy stance affects medium term patterns through the influence of accommodative periods on bank sector recovery and through tightening phases leading to varying impacts on individual banks dependent upon ownership and asset quality. Return pattern differences between PSUs and private sector banks are a result of the NPA resolution cycle and other variables such as governance structures and idiosyncratic events rather than monetary rate sensitivity. The behavioural evidence is in the form of a 62% difference between the level of investor

awareness about repo rate changes at 75.9% and the level of behavioural response confirmed at 13.8%.

7.2 Conclusion

This is indicative of market efficiency, wherein during the MPC period in India, with forward guidance being communicated and comprehensive institutional research available, the effect of expected rate changes is already priced in by banks prior to any official announcement, thereby reducing the observable monthly effect. However, this does not suggest that monetary policy is irrelevant; rather, from the phase and behavioural perspective, it can be seen that monetary policy has an impact on equity market conditions over the medium term. What makes this study structurally significant is the fact that this null result is proven within the context of an entire monetary cycle with various perspectives and with respect to the three main reasons for its failure.

7.3 Recommendations

For Investors

The strategy for positioning in banking stocks must be in line with the monetary stance and its likely duration instead of individual rate cut decisions. In this regard, the analysis indicates that entry into the banking sector is to be done at the beginning of accommodative cycles, whereas PSU banks may be selectively rotated into in the event of recovery in tightening cycles. Repo rate cuts are to be interpreted only as confirmation of the macro-economic situation rather than independent indicators of buy or sell.

For Policymakers

The null hypothesis statistical findings, viewed from the lens of market efficiency, indicate that the MPC's forward guidance and clarity of communication appear to be working effectively: The markets have been able to discount any prior announcements made by them. Continuing transparency within the MPC's minutes, voting and inflation forecasts maintains this efficiency and curtails possibilities of volatility on the day of the announcement. Structural reforms within the banking industry will only enhance this process, especially in PSUs.

Scope for Future Research

The following methodological enhancements could significantly improve this stream of research. Firstly,

event studies based on daily or intraday stock returns during periods immediately surrounding the announcements of MPC decisions would be able to capture the surprise element involved in interest rate movements, along with their immediate window period impact which cannot be discerned by monthly regressions. Secondly, panel regression models including macroeconomic variables such as inflation rate, GDP growth, and credit growth along with bank specific variables like net interest margin (NIM), capital adequacy ratio (CAR), non-performing assets (NPA) ratio, and market return would identify the impact of repo rate changes in multiple regression.

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