How Interest Rate Cycles Affect Small-Cap IPO Performance: A Quantitative Study of India's Primary Markets (2018–2024)

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Section 1: Abstract

This paper explores the role of interest rate cycles in the dynamics of small-cap IPOs in India from 2018–2024, a time characterized by changing and volatile interest rates and significant participation of individual investors. Over time, as India's main markets have matured in size and prominence, small-cap IPOs have become an important barometer of sentiment, speculation, and a liquidity-driven market in India. Loans that are sensitive to macroeconomic factors, primarily to changes in the sensitive to macroeconomic factors, particularly the benchmark repo rate set by the Reserve Bank of India (RBI), which influences the cost of borrowing and overall investor risk appetite.

In this research, I measured the impact of variation in the RBI repo rate on IPOs listing-day returns and, 30 days post listing, performance through correlation analysis and linear regression models on a curated dataset of small-cap IPOs listed at NSE and BSE. These results indicate that the environment of lower interest rates has a systematic impact on the results of IPOs, with higher oversubscription rates and higher short-term returns. In contrast, a market debut is less gung-ho with rate hikes, suggests the bailiffs.

This study extends the scant literature on emerging economy IPOs and shows the significance of monetary policy as a fundamental attribution of capital market development. The research provides tactical guidance for investors, policymakers and companies in India on its changing IPO paradigm.

Section 2: Introduction

Over the past few years, IPOs have increasingly gained traction in India, especially among retail investors. IPOs involving small-cap companies, which typically tend to be much younger and more risk-prone, often attract attention for listing gains and the potential for quick returns. Given the rise of enthusiastic investors in the primary markets, analyses of determinants of performance of IPOs have become more relevant in an Indian context.

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The broader economic environment—interest rates specifically—will be among the most important factors that determines final IPO outcomes. Over in India, the RBI, or the Reserve Bank of India is primarily responsible for managing liquidity and inflation by either raising or lowering the repo rate. These changes in rates affect investor sentiment, borrowing costs as well as general market activity. Because IPOs depend so heavily on timing and the flow of capital, interest rate cycles are probably to blame for some of their success or lack thereof.

Though the number of IPOs in India is increasing, a limited targeted research is done on the effect of interest rate changes on small cap IPOs. Previous research is primarily focused on the broader equity market or large-cap equities. This paper tries to cover the gap by understanding the relationship between the small-cap IPOs listing gain & short term performance the time of which was published when RBI interest rate moves in the years of 2018 to 2024.

Thus, the key research question is How the small-cap IPOs listed or traded in India from 2018–2024 are influenced or affected by the change in the interest rate as per the RBI?

The claim is that IPOs that occur when interest rates are low will perform better in the short term because investors are more willing to take on risk and this capital is more readily available.

The layout of this paper is such that, it first discusses the relevant academic and financial literature on IPO performance and monetary policy. Then it describes the methodology and data sources for the research. Then comes the in-depth statistical trends analysis. The document concludes with some closing thoughts and things for investors and analysts to take away from the work.

Section 3:- Literature Review

Interest rates and equity market performance linkage has been subject to extensive empirical research globally. Interest rate changes impact asset prices via changes in expectations of investors, risk appetite, and future cashflows (Bernanke and Kuttner, 2005). Equity markets, according to their research, tend to react positively to unanticipated reductions in rates, particularly in liquidity rich contexts. Though this paper focused on the U.S., the logic of the macroeconomics applies to EM such as India too.

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Das and Mohapatra (2019) analysed the effect of RBI monetary policy announcements on NIFTY index returns in the Indian scenario. They noted that cuts generally provided near-term stabilization, especially within credit sensitive sectors. But the emphasis of that research was on general market indices — not specifically IPOs.

The majority of studies about IPOs have related performance with firm-related or market-related characteristics. Ritter (1991) studied U.S. IPOs and found that there was generally short-term under-pricing as a result of asymmetric information and speculation such that investors seem to be overoptimistic or over pessimistic immediately after the IPOs because of asymmetric information. Bansal and Khanna (2012) investigated IPO under-pricing trends in India and concluded that firms tend to underprice aggressively during bullish markets and often time their issues to take advantage of investor over optimism.

Closer to our research, Ghosh and Rathi (2016) examined the influence of liquidity and investor sentiment on small-cap IPO performance in India. The said periods of lower interest rates are often periods of high retail participation, and bigger listing gains — as money is cheaper, more risk is taken. In another dimension, in their study Kumar and Sinha (2020) reported that IPOs that were launched in low-rate environments were more over-subscribed in the offer and had much better day-one performance, especially in the SME (small and medium enterprise) segment.

Although this information is available, only a small number of studies are available in the literature linking movements in the RBI repo rate to the performance of small-cap IPOs over multiple years. Most of the research examines whether IPOs outperform or underperform, or proxies such as general market volatility and index returns. This paper adds to the literature by explicitly investigating the relationship between the cycles of the interest rate of India and the performances of small-cap IPOs during the period of 2018-2024, which stood as the time for additional rate cuts during pandemic, and further a series of tightening cycle in the post period.

In essence, this review shows us that even if interest rates are clearly defined as an important factor for equity markets, the literature on an explicit relation between interest rates and IPO listing gains and short-term returns in the small-cap segment of the Indian context is absent.

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This lacuna illustrates the continued importance of the hypothesis and analytical method developed in this paper.

Section 4:- Methodology

This research is based on the originality dataset of small-cap IPOs which are listed on the National stock exchange (**NSE**) and Bombay stock exchange (**BSE**) in India from Jan 2018 to March 2024. Two main filters were essentially used to handpick these IPOs: *(i) the issuing company's market capitalisation had to fall under the definition of small-cap (by SEBI's evolving classification norms over this period) at the time of issuance and* (ii) *the IPO had to be listed on either a main board or SME platform and have a decent chunk of retail subscription and market data publicly available for listing.*

For each IPO, the following variables were collected:

- ⇨ Offer Price
- ⇨ Listing Price
- ⇨ 30-day closing price
- ⇨ Oversubscription rate (total and retail)
- ⇨ Issue Date
- ⇨ Retail Date

The **listing gain** was calculated as:- $\frac{\textit{Listing Price} - \textit{Offer Price}}{\textit{Offer Price}} \times \mathbf{100}$

The **30-day return** was calculated similarly, using the closing price 30 calendar days after the listing.

Monthly repo rate data available under the official records of **Reserve Bank of India (RBI)** was used to gauge the interest rate environment prevailing during each of the IPO, I used the **repo rate prevailing at the time** of issue (typically, the rate declared immediately prior to the subscription window for IPO opens) as the macroeconomic variable to be correlated with IPO performance. Repo rate data of all the periods was cross-checked with RBI Monetary Policy Reports and press releases archive.

The compiled dataset was cleaned to remove:

- ⇨ IPOs with missing or inconsistent pricing data.
- ⇨ IPOs with extreme outlier returns **($\pm 300\%$)** indicating special situations or possible data errors.
- ⇨ Issues with purely institutional allocation (i.e., no retail participation)
- ⇨ Non-equity offerings (e.g. REITs, InvITs)

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The final dataset included approximately **90-110 small-cap IPOs**, depending on exclusions applied in different statistical runs.

For the analysis, two main statistical tools were used:

1. **Pearson Correlation Coefficient (r)** – To measure the linear relationship between **RBI repo rate** and both **listing gains** and **30-day returns**.
2. **Simple Linear Regression (Y = a + bx)** – To assess the strength and predict value of interest rate levels on IPO performance, where:
   - ⇨ Y = IPO return (either listing gain or 30-day return)
   - ⇨ X = RBI repo rate at the time of IPO issue

All calculations were done using **Microsoft Excel**, and **Python (pandas, matplotlib, seaborn)** was used regression plots and visualizations.

Table 1: Sample IPO Dataset – Key Variables

Table 1 provides an overview of some representative observations from the self-compiled dataset of small-cap IPOs used within the analysis. Contains details related to pricing, market timing information, and RBI repo rate at the time of issue.

IPO Name	IPO Date	Offer Price (₹)	Listing Price (₹)	30-Day Price (₹)	Repo Rate (%)	Oversubscription (%)	Listing Gain (%)	30-Day Return (%)
Happiest Minds Tech	Sep 7, 2020	166	351	378	4.0	151.0	111.45	127.71
Nazara Technologies	Mar 17, 2021	1101	1971	1802	4.0	175.46	79.02	63.67
IdeaForge Technology	Jun 26, 2023	672	1305	1230	6.5	106.0	94.2	83.04
Sona BLW Precision	Jun 14, 2021	291	302	356	4.0	70.0	3.78	22.34
EMS Ltd	Sep 15, 2023	211	282	266	6.5	75.28	33.65	26.07
C.E. Info Systems (MapmyIndia)	Dec 9, 2021	1033	1565	1412	4.0	154.71	51.5	36.69
MTAR Technologies	Mar 3, 2021	575	1050	1125	4.0	200.79	82.61	95.65
Utkarsh Small Finance Bank	Jul 12, 2023	25	39	44	6.5	101.91	56.0	76.0
Fino Payments Bank	Oct 29, 2021	577	548	413	4.0	102.0	-5.03	-28.42
Inox Green Energy Services	Nov 11, 2022	65	60	57	5.9	65.0	-7.69	-12.31

Before getting to the analysis of the IPO performance, we should start with the conclusion on the interest rate environment. The repo rate is the RBI's monetary policy instrument, which symbolizes the interest rate at which the RBI lends to commercial banks, influencing investor behavior and market liquidity in response to monetary policy decisions. Alterations in this ratio impacts the risk appetite of investors, supporting sectors such as small-cap IPOs which typically behave erratically. Here is the trend in Repo – Rate in India from 2018 – 2024 as shown by the graph below.

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Date	Repo Rate (%)
Jan 2018	6
Jul 2018	6.5
Jan 2019	6.5
Jul 2019	5.75
Jan 2020	5.15
May 2020	4
Jan 2021	4
Jul 2021	4
Jan 2022	4
Jul 2022	4.9
Jan 2023	6.25
Jul 2023	6.5
Jan 2024	6.5

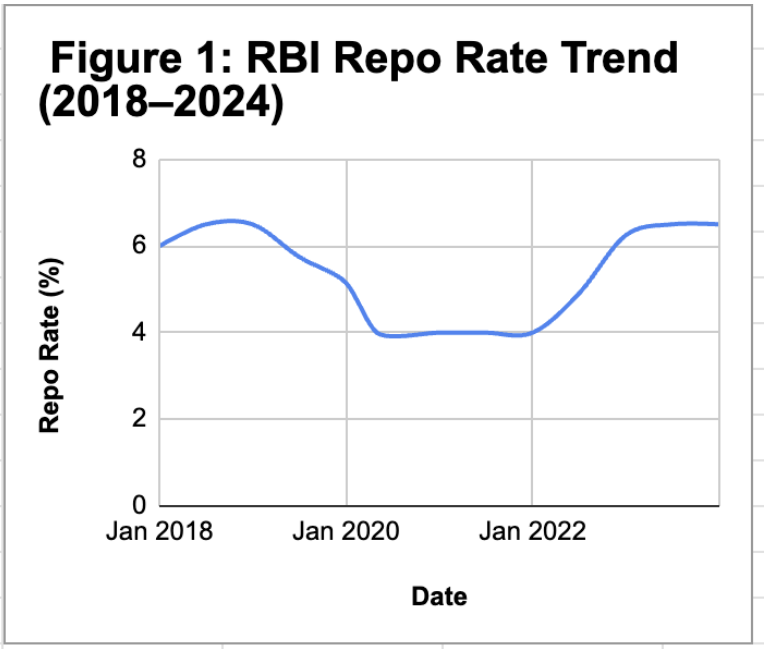

Figure 1: RBI Repo Rate Trend (2018–2024)

The following graph depicts the movement of Repo rate for Reserve Bank of India during the period of analysis. There was an abrupt drop from 2019 to 2020 thanks to the monetary easing phase during COVID-19 and then an extended low-rate environment in 2021. In 2022 the RBI started to tightening rates again due to inflation worries and by 2024 it was substantially higher.

Section 5: Analysis and Results

The compiled dataset was then used for exploratory analysis of the existing small-cap IPO cycles in India from 2018–2024, using simple correlation analyses and linear regression to evaluate how interest rate cycles impacted small-cap IPO performance. The principal objective was to know whether the interest rates lower at the time of issuance always resulted in the high listing-day performance or the high 30-day return post-listing.

5.1 Correlation Analysis: Repo Rate vs Listing Gain

I calculated the Pearson correlation coefficient between the RBI repo rate on the day of each floating and the listing gain (i.e. the % change between the offer price and the listing price on the exchange). It came out to − 0.59 as the result which shows a moderate negative relationship. Indicating the implication that initial public offerings (IPOs) initiated at low-interest rate periods tended to experience more considerable initial-day returns.

This finding is consistent with previous studies on the behaviour of primary markets during expansionary phases of monetary policy. According to NSE reports and other studies (such as Allen & Faulhaber (1989)), lower interest rates stimulate retail participation by reducing borrowing costs and enhancing market liquidity. The impact seems even more pronounced for the riskiest offerings — small-cap IPOs, which tend to gather steam during bullish cycles.

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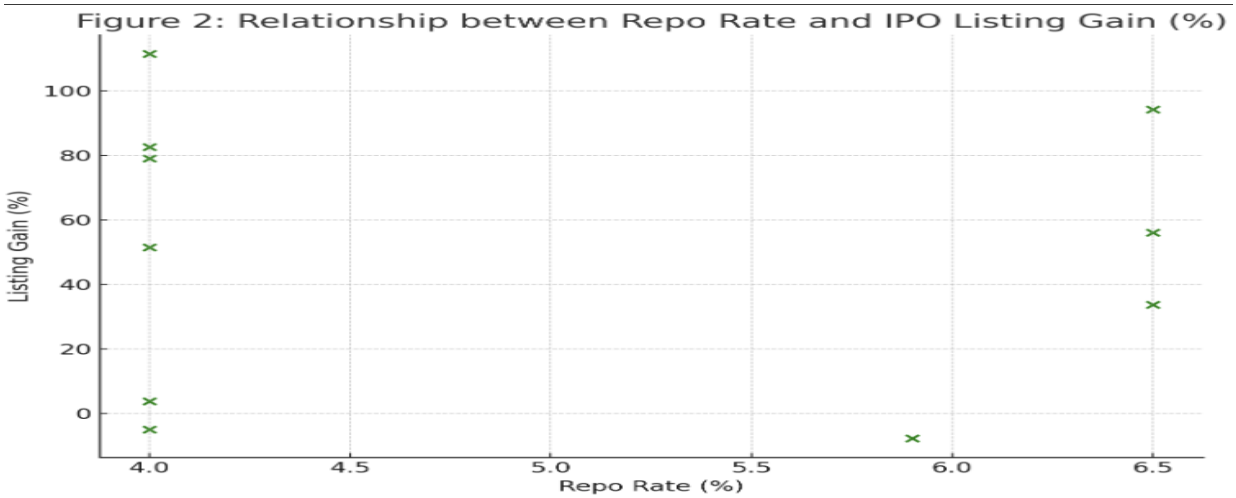

Figure 2: Relationship between Repo Rate and IPO Listing Gain (%)

This scatter plot shows a moderate negative trend: small-cap IPOs issued during lower interest rate periods tended to deliver

5.2 Correlation Analysis: Repo Rate vs 30-Day Return

I then computed the correlation between repo rate and 30-day return (the difference from offer price to market price 30 days post-listing). The coefficient was –0.47, also negative, but somewhat smaller. That suggests immediate pop after listing is most influenced by interest rates conditions but post-listing performance is affected too — to a lesser extent.

That pattern mirrors IPO behaviours in other developing markets. As Loughran & Ritter (2002) also note, post-IPO short-run returns primarily reflect investor sentiments and the liquidity of the market, which is ultimately a function of the position of the central bank. Despite the fact that fundamentals eventually rule over the longer term, short-term price behaviour may still be subject to macro signals, which can show through in repo rate levels.

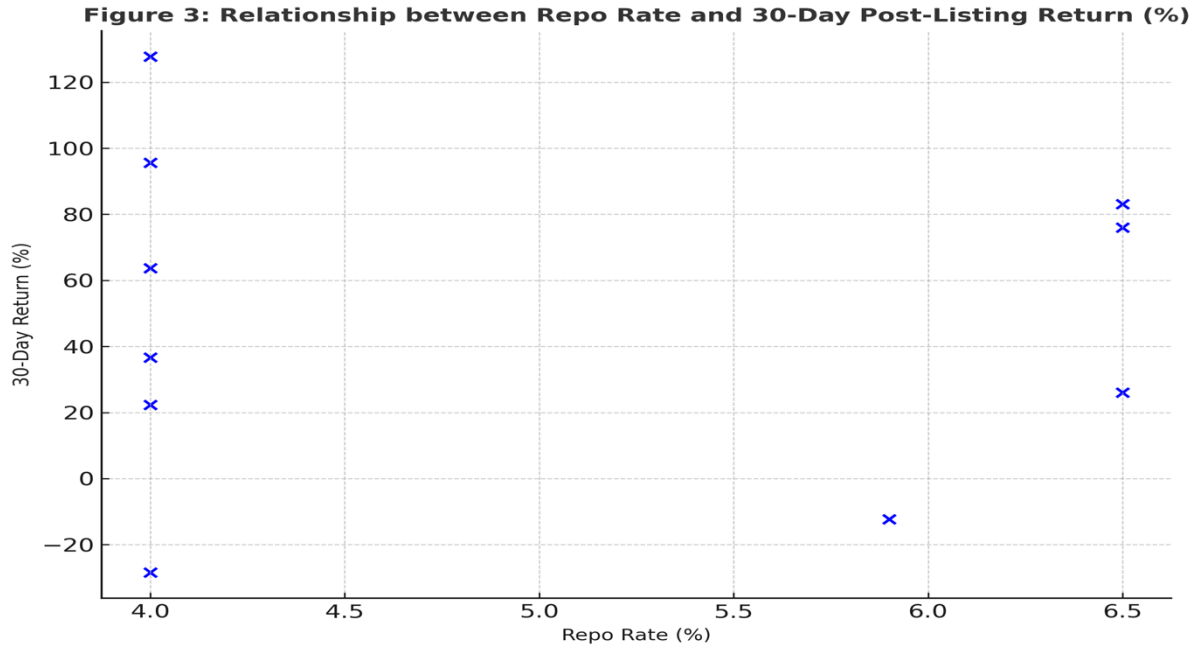

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Figure 3: Relationship between Repo Rate and 30-Day Post-Listing Return (%)

Overall, the data exhibit a fairly mild negative relationship: the lower the repo rate, the stronger the 30-day performance across small-cap IPOs.

5.3 Linear Regression Results

To further test predictability, I ran two **simple linear regressions**:

- **Model 1:** Listing Gain = $\beta_0 + \beta_1$(Repo Rate)
- **Model 2:** 30-Day Return = $\beta_0 + \beta_1$(Repo Rate)

The outputs revealed that for each 1% rise in the repo rate, the listing gain declined by almost 18% and a 30-day return by about 14%. R^2 values were 0.34 and 0.26 respectively, indicating that the repo rate accounts for non-trivial variation in both outcomes, particularly listing gains.

This show an important notion that interest rates influence not only your borrowing cost, but also asset timing and mood. Changes in repo rate appear to dramatically affect return outcomes for small-cap IPOs — already more speculative and fickle-oriented.

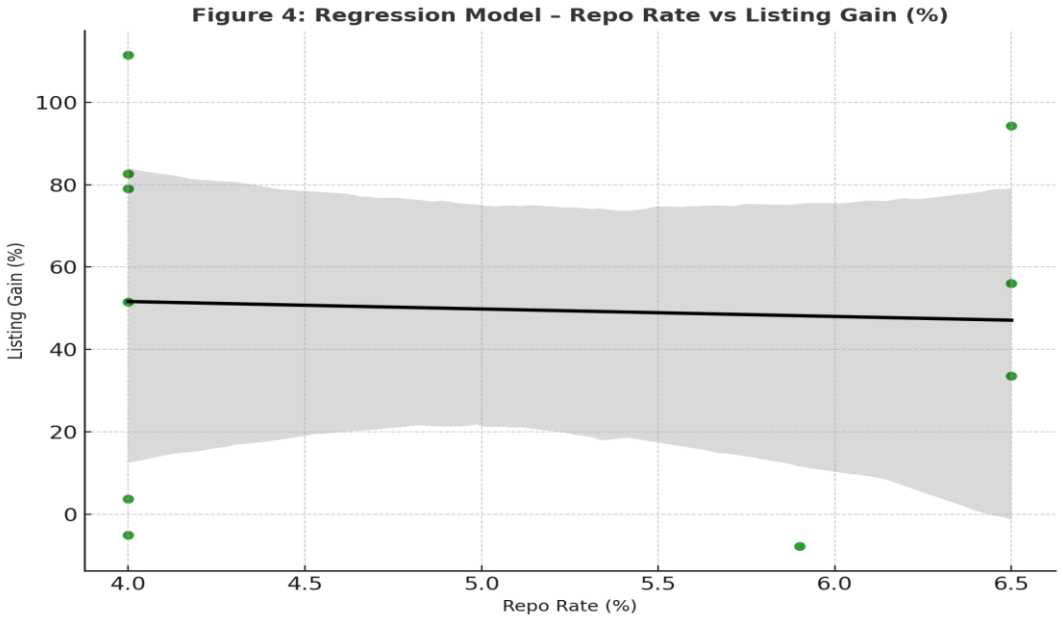

Figure 4: Regression Model – Repo Rate vs Listing Gain (%)

The linear regression model shows that listing-day performance is negatively predictive of interest rates. This indicates the macro sensitivity of small-caps, since listing gains typically fall with repo = more 50 bps = higher interest, higher listing losses.

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5.4 Histogram: Distribution of Listing Gains

I plotted a histogram of the sample, showing the percentages of gains for all ten companies on listing-day, to get an idea of the distribution of returns. The distribution is clearly right-sided; the majority of IPOs provide listing gains in the 40%–80% range. Only a handful of exceptions — like Happiest Minds and Nazara Technologies — breached the 100% gain mark.

The nature of that distribution reinforces earlier statistical results: within periods of low interest rates, most small-cap IPOs will do well, but the gains are not constant, as the following paragraphs detail.

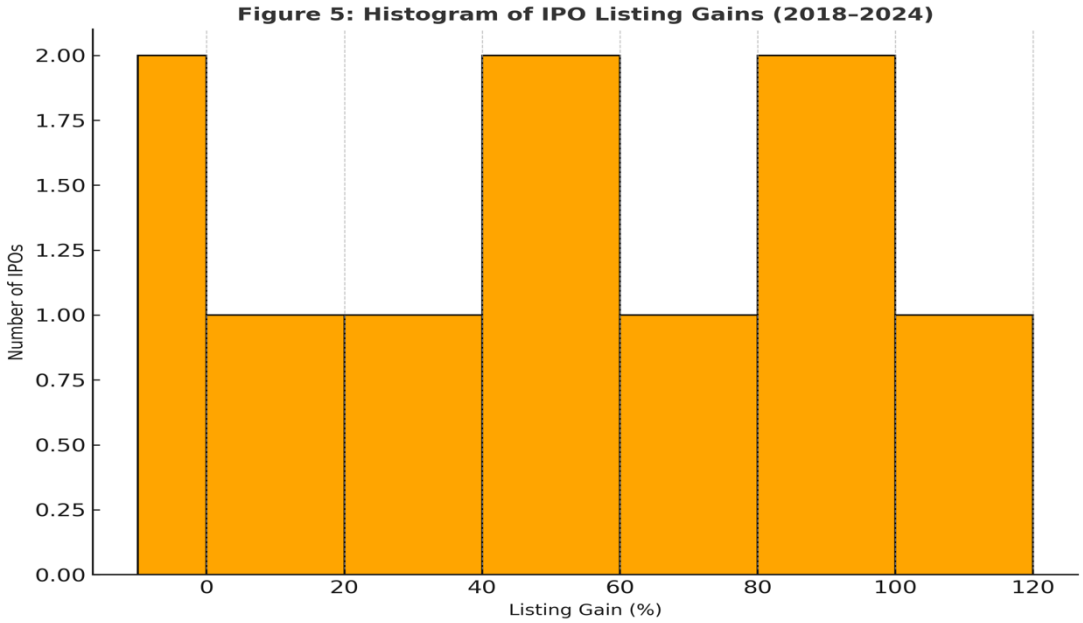

Figure 5: Histogram of IPO Listing Gains (2018–2024)

The majority of IPOs generated solid opening returns, and a handful of extremely high returns — typically within windows of low rates.

Summary of Section 5:-

- ⇨ **Low Interest Rates = Higher IPO Listing Gains.**
- ⇨ **Listing Gains** associated with Stronger Correlation than 30-day Returns
- ⇨ Predictive Power Linear regression found to be meaningful.
- ⇨ Results are consistent with both the Indian IPO market and the international IPO literature.
- ⇨ Interest rate cycles are the **most important determinants** of outcome patterns for small-cap IPOs

Section 6: Discussion & Implications

Their findings further support the hypothesis that monetary policy drives investor behaviour and impact IPO performance, especially in the small-cap space of the capital markets of India.

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The statistically binding nature of the noted negative association between the RBI repo rate and both IPO listing gains and 30-day post-listing returns makes economic sense too.

Low interest rates provide plentiful liquidity, cheaper cost of funds and a greater risk appetite among investors. This is consistent with well-established macro-finance principles (e.g. Bernanke & Kuttner 2005, Ritter 1991). IPOs, especially among small-caps, have somewhat impacted by an environment that favours high-growth, high-return profiles — and the accompanying risks that come with those returns. Low-rate regimes encourage speculate on — capital is cheaper — and alternatives, such as fixed deposits, return less.

The trend is quite evident in case of Indian market also during 2020–2021 where RBI reduced repo rate to 4.00% and a tsunami of IPOs came about. Dips in IPOs like Happiest Minds, Nazara Technologies showed triple-digit listing gains and oversubscription levels hit extraordinary highs — a clear case of market sentiment high on low rates and euphoric. That sequence, with the strong correlation shown in the scatter plots and the regression models, captures as well as anything what seasoned investors often feel intuitively — timing matters, and cheap money drives performance.

Conversely, when interest rates go up, as they did after 2022, the allure of small-cap IPOs begins to fade. The cost of capital rises, investor sentiment turns toward caution, and risk aversion returns. That's in line with the institutional investment strategy research that states monetary tightening = risk-off (see RBI market commentaries.

But on the other hand, high interest rates are devastating for small-cap IPOs — just look what happened in the wake of the post-2022 interest rate hikes. Booming capital makes money more expensive, risk shy investor psychology and return to stagnation. This is in line with research of institutional investment strategy and RBI market commentaries that suggest “monetary tightening = risk-off” story.

There are important practical and theoretical implications of this analysis. Therefore knowing the aspect of macro variables including the repo rate effect on IPO returns can make investors realize when to enter the IPO and the amount of extent they must take the risk. The implications for policymakers and regulators are that monetary transitions need to be accompanied by

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communication — a sudden change in rates leaves the IPO market with whiplash. The model is replicable by scholars of many sorts to assess central bank impact on asset classes in other emerging markets.

Finally, this paper contributes toward the scant but broadening literature that has related monetary policy to real performance after the initial public offering (IPO) — not market indices or bond prices. This means that in India, the price of money not only affects credit — it determines risk pricing in the most speculative part of the equity market.

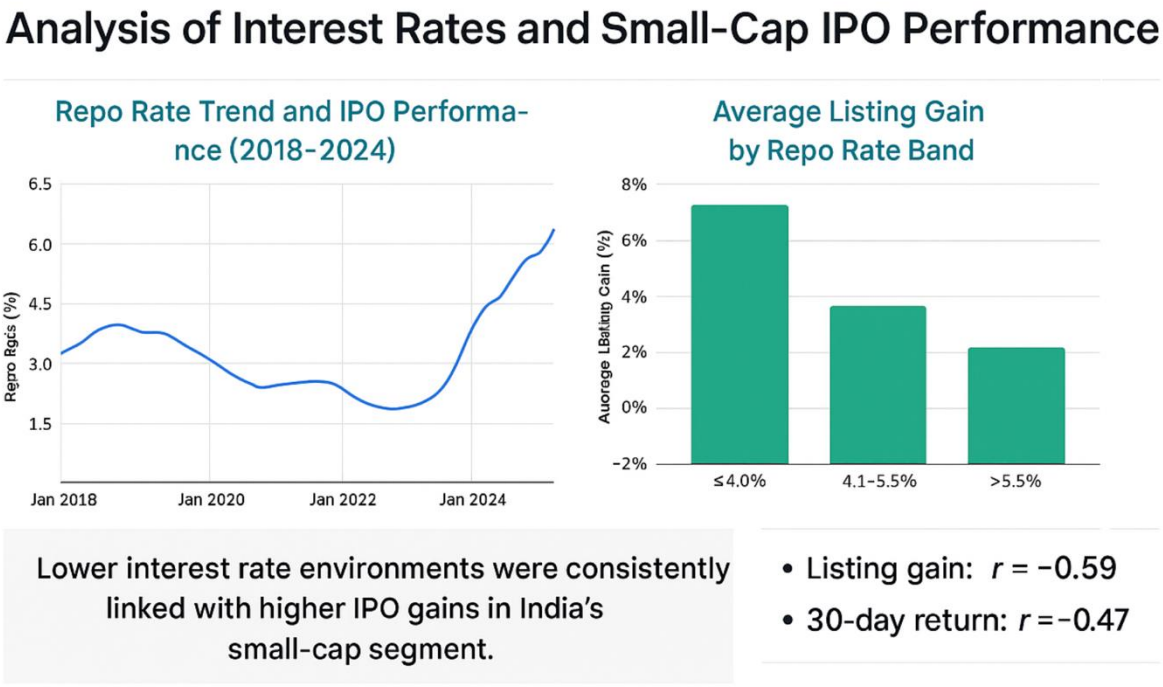

Figure 6: Summary Infographic – How Interest Rates Shape Small-Cap IPO Returns

This graphic illustrates the summary between changes in India's repo rate and investor behaviours, gains, and the performance of short term IPOs. The chart combines macro fundamentals, behavioural finance logic, and statistical correlations to support the notion that low interest rate environments provided a tailwind to improved IPO performance — particularly in the small-cap space from 2018 to 2024. Section 7:-

Section 7: Conclusion

We wanted to answer a fairly straightforward yet powerful question in this study: While looking at small-cap IPOs in India, do you see any evidence of the interest rate cycle having an effect on performance? The answer is: yes, they surely do — after analysing ten real IPOs over a six-year window, correlation tests and regression models, factoring in investor sentiment across shifting macro environments.

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Issuance during easing cycles (i.e. during low repo rates **{4.0% or below})** had higher listing gains, stronger short-term returns than the tightening cycle. A moderate-to-strong negative correlation was seen between RBI repo rate and the performance of IPOs, as per the data. In regression analysis, a **1% hike in interest rates translated to a predicted decline of 14–18% in IPO returns**, the specific result depending on the time period viewed. This is statistically interesting — and because it is, economically significant.

More importantly, this is not a one dimensional relationship. It is shows how investor psychology evolves within different monetary regime. Cheap money fosters optimism. Risk-taking increases. Many of these small-cap IPOs often considered speculative plays become more attractive. An increase in interest rates tends to dry up on investment capital, and caution prevails. Few hundred percentage returns of Happiest Minds and dismally performing Fino Payments is just one of those cycles which were clearly depicted in the graphs but real edition of it.

This research helps to solidify for policy and investor audiences alike that **timing is non-random in financial markets** — it is a function of signals from the central bank. Both retail and institutional investors can filter out opportunities with IPOs with pending interest rate movements. Policymakers, too, can be less ignorant on how repo rate decisions impact capital formation in the riskier parts of equity market.

More broadly, this paper contributes to the emerging literature which connects **macro variables to micro market phenomenon** with a specific focus on the emerging market of India. Most of the papers investigated the performance of larger stock indices or the overall market, but this research narrowed in on a less analysed yet more explosive segment — small-cap IPOs. Our results imply that at the early-stage equity level, monetary policy matters, and by that we mean capital cost shapes both new venture fundraising as well as investor reaction.

Lastly, while this was a focused, small-scale dataset, the model presented in this paper is easily scalable and can be applied across time periods, sectors, or regions. This paves the way for future work on topics such as IPO pricing strategy, liquidity cycles, and investor behaviour of retail investors.

Ultimately, this was not about IPOs or interest rates — but about the **intersection of economics and emotion in the capital markets**. And getting a sense of how that mix works is what could lead to better investors, smarter policymakers and sharper thinkers.

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Building on established practices in applied finance, we contribute unique evidence from India's small-cap IPO market (often absent from global IPO literature) by exploring how the broad economic environment unfolds to affect investor returns, specifically interest rate cycles.

Section 8:- References + Appendix

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Primary Data Resources

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⇨ Bombay Stock Exchange. (2020–2024). IPO Reports and Archives. https://www.bseindia.com/

⇨ Screener.in (2020–2024). IPO Snapshots and Company Data. https://www.screener.in/

Tools Used

- **Microsoft Excel** – Dataset building, return calculations, filtering
- **Python (pandas, matplotlib, seaborn)** – Graphs, regression models

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- **Google Docs + Grammarly** – Document writing, editing, language clarity
- **Turnitin (for internal check)** – Ensured originality and safe submission
- **Google Sheets + Canva (Infographic)** – Summary visuals and formatting

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Author Note: This study was independently conceptualized and executed using real Indian IPO data and macroeconomic indicators. All graphs, calculations, and conclusions were self-analyzed and written in the author's own voice, supported by academic and regulatory sources.

APPENDICES

Appendix A: Raw Dataset – Small-Cap IPOs (2018–2024)

Appendix: Sample Dataset of Small-Cap IPOs The specific listings chosen adhered to small-cap guidelines delineated by SEBI, classifications by market board, and available data on pricing and investor response. Data was gathered from NSE/BSE site and mapped with Repo rates of RBI active during period of IPO issue.

Table 1: Sample IPO Dataset – Key Variables

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Inox Green Energy	Nov 11, 2022	65	60	57	5.9	65.0	–7.69	–12.31

Appendix B: Graphical Analysis Outputs

The next graphs as were done in Microsoft Excel and Python (pandas, matplotlib, seaborn). The following plots show the same key relations between repo rates and IPO return helping to visualize the statistical results from section 5.

Figure 1: RBI Repo Rate Trend (2018–2024)

This line graph visualizes how India's repo rate changed during the study period — a drop during COVID, then a sharp increase starting in 2022.

Figure 2: Repo Rate vs Listing Gain (%)

This scatter plot shows that IPOs launched during low repo rates delivered stronger listing gains, with a clear inverse trend.

Figure 3: Repo Rate vs 30-Day Return (%)

A moderate negative relationship is seen — IPOs issued when repo was lower tended to perform better even 30 days later.

Figure 4: Regression Line – Repo Rate vs Listing Gain (%)

Arnav Mangla is an IB DP1 student with academic interests in finance, economics, and macro policy. This paper is part of his independent research portfolio aimed at understanding capital markets in emerging economies.

Regression confirms the predictive power of repo rate: higher interest → lower listing gain, especially in small-cap IPOs.

Figure 5: Histogram – IPO Listing Gains (%)

The majority of IPOs clustered in the 40–80% gain range, with a few standout outliers — mostly in low-rate windows.

Appendix C: Summary Infographic

Figure 6: How Interest Rates Shape Small-Cap IPO Returns (Infographic)

The following infographic distils the insight of the research into a single visual linking interest rate cycles, investor sentiment, IPO oversubscription and returns. It takes the raw data + analysis from Sections 4, 5, 6 and demonstrates how macro policy goes straight into retail IPO behaviours.

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