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Determinants of Long-Term IPOs Performance in India, The Role of Sentiment and Market Timing

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ABSTRACT

This study investigates the determinants of short-term and long-term IPO performance in India, with particular emphasis on investor sentiment and market timing. The sentiment of the investors is taken in terms of the Grey Market Premium (GMP) and timing in the market taken in the terms of the changes in the NIFTY index and variations in the India VIX during the period of IPO listing. The analysis in the study is based on secondary data of the recent IPOs in India where statistical analysis is done to analyze the correlation, regression and ANOVA analysis using SPSS to determine the relationship between the listing-day performance and post listing returns.

The empirical findings demonstrate that investor sentiment, GMP, has a high and statistically significant impact in short-term IPO returns, in terms of listing price and initial returns. Nevertheless, this effect decreases and even becomes negative in the long-term, which means that IPOs that have numerous pre- listing hypes will most likely face post-listing price adjustments. Market timing variables especially percentage changes in India VIX, on the contrary, do not show much effect on short as well as long-term IPO performance.

Altogether, the results indicate that even though market optimism may seem to be successful in the short run, listing strength and underlying market fundamentals, rather than speculative pre-listing sentiment are key drivers of sustainable long-term performance. The research is also relevant to the literature concerning behavioural finance because it is based on the empirical study of the Indian IPO market that offers limited persistence to the sentiment-driven effects.

Keywords: Initial Public Offerings (IPOs), Long-term performance, Investor sentiment, Grey Market Premium (GMP), Market timing, India VIX, NIFTY index, Listing-day returns, Behavioural finance.

Introduction

The IPO market in India has been experiencing incredible development in the past years and has become a critical source of capital creation and involvement of investors. However, the controversy on IPO pricing and performance in the long-term remains an unresolved and complicated issue. Although there are IPOs of the kind that continue to remain or surpass the initial valuation, others experience slow dwindling after the buzz that surrounds the listing-day. The behavioral finance wisdom indicates that the sentiment of the investors and the time of the day are other significant influences of IPO performance. One example is the so-called Grey Market Premium (GMP) of investors indicating unofficial expectations prior to listing, and often followed by good debut performances. Conversely, this is due to wider market environments. constituted by such indices such as NIFTY and volatility such as India VIX can generate short term price action and volatility. Nevertheless, the question that arises is whether these pre-listing factors continue to influence the IPO performance beyond the first trading days. Under conditions of high retail involvement and high levels of speculative feeling on the market, it is important to realize the short-term and long-term effects of these factors to enhance pricing efficiency and investment policies. This paper seeks to address this gap by empirically analyzing the combined effect of sentiment and market timing on long-term IPO returns in India, as opposed to the immediate boom or downstep in the listing day.

Problem Statement

Indian IPOs have high volatility at the time of listing and low returns in the long term. Even though the Grey Market Premium is a popular indicator of investor sentiment, its forecasting long-term performance is not so assured. On the same note, market timing triggers like the India VIX and the NIFTE index trends appear to influence the initial pricing but have ambiguous effects on the long-term results. In order to fill this gap, this research aims to answer the following

research question: How do sentiment (GMP) and market timing indicators (VIX and NIFTY) jointly predict the long-term IPO performance in India which is not limited to the first listing-day performance results?

Review of Literature

The current research evidence on the Indian IPO performance shows that the results vary significantly compared to those found in the developed markets and the market conditions and firms factors are critical. Bhatia and Singh (2010) report remarkably high long-run performance of IPOs that are issued between 1992 and 2001, which is characterized by high cumulative abnormal returns which is due to the bullish market periods, high retail presence and efficient market timing by the issuers, but with volatility and sector-specific variation. However, Das, Saha, and Kundu (2016) who examine the IPOs between 2000 and 2014 based on BHAR and calendar-time regressions report positive, but not statistically significant long-run abnormal returns. Their findings indicate that not all Indian IPOs are associated with systematic underperformance and that issues like the size of firms, age, industry belonging, and methodology choices have a substantial impact on the performance realized.

The more recent literature pays more attention to investor sentiment as one of the major factors of IPO pricing and post-listing performance in India. Krishnamurti, Thong, and Vishwanath (2011) demonstrate that Grey Market Premium (GMP) is a good predictor of the listing-day returns, which is the optimism of the investors, but sentiment-driven IPOs tend to underperform in the long term as prices turn out to be corrected. Clarke et al. (2016) also show that the high-sentiment IPOs have superior performance in the first-day returns and poorer performance in the long-term, especially when the issue is dominated by retail investors, but the participation of institutional investors stabilizes this outcome. Recent research by Bashir (2025) results in online attention and media sentiment enhancing initial returns on IPOs issued in the 2015-2023 period but after which returns reversed, which again highlights the significance of sentiment cycles
And market timing as a factor in explaining IPO performance in India.

Research Objectives

1. To examine the impact of the investor sentiment (GMP) on IPOs on long-term and short-term returns.
2. To investigate the effect of market timing (VIX percentage change) on post-IPO performance.
3. To establish the predictability of listing-day success (listing price and returns) in predicting long-term trading performance.
4. To determine the aggregate effect of investor sentiment, market timing and fundamentals on long-run IPO performance.

Scope of the Study

The research takes into account IPOs, which were listed in India in the years 202024, and the industry list is rather broad. Variables the Grey Market Premium (GMP), the issue size, the percentage change in the India VIX, listing price, listing returns, the last traded price (LTP), and the 52 week high are analyzed using secondary data. The research applies the SPSS quantitative analysis and uses the descriptive statistics, correlation, regression, ANOVA, and chi-square tests to analyze the relationship between the variables of investor sentiment, market timing, and IPO performance.

Methodology

Research Design

The research takes the form of descriptive and analytical research design. The descriptive part is based on summarizing the characteristics of IPO and market indicators in the form of statistical measurements. The analytical part entails testing hypotheses and comparing correlation between investor sentiment (GMP), market timing (VIX and NIFTY) and IPO performance procedures (ie listing returns and long- term prices).

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Nature and Source of data

The researcher uses secondary data collected through credible sources of the public such as:

1. Official IPO releases and company documents of NSE and BSE.
2. Monitoring websites of grey markets on GMP.
3. NIFTY and India VIX values.
4. Price information such as listing-day close, last traded price, 52-week highs etc. in financial databases (Moneycontrol, Economic Times and Screener.in)

The IPOs in different industries are included in the sample and cover the periods of 2020-24 to ensure the sample is diverse and generalizable.

Variables and Operational database

Variable	Definition / Measurement
Listing Price	The final market price on the day of IPO listing.
Listing-Day Return (%)	((Listing Price – Issue Price) / Issue Price) × 100
LTP (Last Traded Price)	Price observed 6–12 months after listing, representing long-term performance.
52-Week High	Highest trading price within one year post listing.
GMP (Grey Market Premium)	Pre-listing informal price premium indicating investor sentiment.
VIX % Change	Change in India VIX index around the IPO date, representing market volatility.
IPO Size	Total issue size in crores.
Subscription Rate	Ratio of bids received to shares offered.

Tools and Techniques

The analysis was done based on SPSS software utilizing the following statistical instruments:

1. Descriptive Statistics: Mean, standard deviation, range, skewness, and kurtosis to describe the dataset.

2. Correlation Analysis: Pearson and Spearman correlations to determine the strength and direction of the relationship between variables.

3. Multiple Regression Analysis: To determine key drivers of long-run IPO performance by testing combined effects of sentiment and market timing variables.

4. ANOVA: To check if differences in IPO performance among various industries or sentiment groups exist or not.

5. Chi-Square Test: To find the association between categorical groups (for example, high vs. low GMP and strong vs. weak long-term performance).

Research Hypothesis

H_1: There is a significant correlation between Grey Market Premium (GMP) and listing-day return.
H_{01}: There is no significant correlation between Grey Market Premium (GMP) and listing-day return.

H_2: There is a significant correlation between Grey Market Premium (GMP) and long-term IPO performance.

H_{02}: There is no significant correlation between Grey Market Premium (GMP) and long-term IPO performance.

H_3: Listing-day success (price and return) foretells enduring long-term performance.

H_{03}: Success on the listing day (in terms of return and price) fails to forecast long-term performance.

Results and Analysis

1. Descriptive Analysis

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic
gmp	168	-80.0000000000000000	1295.0000000000000000	114.27797619000000	196.615425539	3.175	.187	12.467
ipo_size(in crore)	169	60.00	18300.00	1659.7077	2625.05844	3.928	.187	19.104
listing_day_return_pct	169	-23.728813560	249.693251500	27.748719545 24	41.610124705 439	2.173	.187	6.218
listing_price	169	12.00	2607.00	540.0053	476.83679	2.001	.187	4.477
LTP	166	8.81	7227.50	671.4090	918.97299	4.503	.188	26.775
vix_pct_change	169	-7.6300	11.5200	-.007395	3.5895361	.468	.187	.709
52 WEEK HIGH	168	11.60	7822.00	868.3796	1030.75171	3.854	.187	20.540
Valid N (listwise)	164							

This summary table provides a snapshot of all key variables (GMP, IPO size, listing price, listing- day return, long-term performance, VIX change, and 52-week high), including mean, range, standard deviation, skewness, and kurtosis. The extreme values of skewness and kurtosis for long- term performance and GMP highlight that IPO outcomes and pre-market sentiment are heavily influenced by outliers and non-normality, justifying the use of robust regression techniques and careful interpretation of model results.

2. Correlation Analysis

Correlations

		gmp	vix_pct_change	listing_price	listing_day_return_pct	52 WEEK HIGH	LTP	ipo_size(in crore)
gmp	Pearson Correlation	1	.007	.778**	.550**	.310**	.294**	-.069
	Sig. (2-tailed)		.930	.000	.000	.000	.000	.372
	N	168	168	168	168	167	165	168
vix_pct_change	Pearson Correlation	.007	1	.026	-.005	-.086	-.078	.115
	Sig. (2-tailed)	.930		.735	.953	.270	.315	.137
	N	168	169	169	169	168	166	169
listing_price	Pearson Correlation	.778**	.026	1	.277**	.509**	.485**	.096
	Sig. (2-tailed)	.000	.735		.000	.000	.000	.213

	N	168	169	169	169	168	166	169
listing_day_return_pct	Pearson Correlation	.550**	-.005	.277**	1	.017	.014	-.124
	Sig. (2-tailed)	.000	.953	.000		.826	.862	.109
	N	168	169	169	169	168	166	169
52 WEEK HIGH	Pearson Correlation	.310**	-.086	.509**	.017	1	.984**	-.041
	Sig. (2-tailed)	.000	.270	.000	.826		.000	.601
	N	167	168	168	168	168	165	168
LTP	Pearson Correlation	.294**	-.078	.485**	.014	.984**	1	-.047
	Sig. (2-tailed)	.000	.315	.000	.862	.000		.544
	N	165	166	166	166	165	166	166

Correlations

			gmp	vix_pct_change	listing_price	listing_day_return_pct	52 WEEK HIGH	LTP
Spearman's rho	gmp	Correlation Coefficient	1.000	.070	.508**	.793**	.330**	.314**
		Sig. (2-tailed)	.	.366	.000	.000	.000	.000
		N	168	168	168	168	167	165
	vix_pct_change	Correlation Coefficient	.070	1.000	.122	.018	.108	.120
		Sig. (2-tailed)	.366	.	.115	.817	.165	.124
		N	168	169	169	169	168	166
	listing_price	Correlation Coefficient	.508**	.122	1.000	.221**	.750**	.733**
		Sig. (2-tailed)	.000	.115	.	.004	.000	.000
		N	168	169	169	169	168	166
	listing_day_return_pct	Correlation Coefficient	.793**	.018	.221**	1.000	.078	.062
		Sig. (2-tailed)	.000	.817	.004	.	.314	.425
		N	168	169	169	169	168	166
	52 WEEK HIGH	Correlation Coefficient	.330**	.108	.750**	.078	1.000	.959**
		Sig. (2-tailed)	.000	.165	.000	.314	.	.000
		N	167	168	168	168	168	165
	LTP	Correlation Coefficient	.314**	.120	.733**	.062	.959**	1.000
		Sig. (2-tailed)	.000	.124	.000	.425	.000	.
		N	165	166	166	166	165	166

Both the Pearson and Spearman correlation matrices above illustrate the relationships between all key variables. GMP is strongly correlated with listing-day returns but only weakly correlated with long-term performance. This confirms that IPOs with higher GMPs tend to have larger initial pops, but high GMP does not reliably predict strong longer-term

returns. The low correlations for VIX and IPO size with long-term performance support the regression findings that these are not strong determinants in this sample.

3. Multiple Regression Analysis

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38281419.862	4	9570354.965	15.169	.000[b]
	Residual	100944805.534	160	630905.035		
	Total	139226225.396	164			

Coefficients[a]									
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance
1	(Constant)	91.333	108.692		.840	.402	-123.324	305.990	
	gmp	-1.426	.541	-.307	-2.638	.009	-2.494	-.359	.336
	listing_price	1.444	.228	.736	6.335	.000	.994	1.895	.336
	vix_pct_change	-23.286	17.239	-.092	-1.351	.179	-57.331	10.759	.981
	ipo_size(in crore)	-.014	.027	-.035	-.519	.604	-.068	.040	.979

These three tables summarize the multiple regression analysis explaining long-term IPO performance. The model is statistically significant ($F = 15.17$, $p < .001$, $R^2 = 27.5\%$), with GMP showing a significant negative association and listing price showing a strong positive effect. VIX change and IPO size have no significant association with long-term returns.

4. Chi-Square Test

			LTP_CAT		
			1.00	2.00	Total
GMP_CAT	1.00	Count	98	58	156
		Expected Count	93.6	62.4	156.0
		% within GMP_CAT	62.8%	37.2%	100.0%
		% within LTP_CAT	99.0%	87.9%	94.5%
		% of Total	59.4%	35.2%	94.5%
	2.00	Count	1	8	9
		Expected Count	5.4	3.6	9.0
		% within GMP_CAT	11.1%	88.9%	100.0%
		% within LTP_CAT	1.0%	12.1%	5.5%
		% of Total	0.6%	4.8%	5.5%
Total		Count	99	66	165

	Expected Count	99.0	66.0	165.0
	% within GMP_CAT	60.0%	40.0%	100.0%
	% within LTP_CAT	100.0%	100.0%	100.0%
	% of Total	60.0%	40.0%	100.0%

Value		df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.480[a]	1	.002		
Continuity Correction[b]	7.448	1	.006		
Likelihood Ratio	9.925	1	.002		
Fisher's Exact Test				.003	.003
Linear-by-Linear Association	9.423	1	.002		
N of Valid Cases	165				

The crosstab and accompanying chi-square table show a significant statistical association between GMP category and long-term IPO performance category (Pearson $\chi^2 = 9.48$, $p = 0.002$). Notably, IPOs in the high GMP group are more likely to appear in the poor long-term performance group— implying high GMP often signals overhyped issues that underperform over time

Findings and Discussion Descriptive Analysis

The descriptive analysis shows that the performance and IPOs in India vary greatly. attributes. The values of the Grey Market Premium (GMP) were extremely varied, which are the values of the. The interest and pre-listing expectations of a way investor vary with each IPO. The mean change in the VIX on listing dates was quite small, which means that most IPOs took place. in peaceful market periods. Remarkably, long-term prices were highly kurtotic - in other words. words, even though there were only a few IPOs that performed exceptionally well, most of them offered. below average or average returns. This highlights the imbalanced performances of IPOs in the. Indian market.

Correlation Analysis

The correlation analysis showed that there is a strong positive correlation between GMP and listing-day returns, supporting the importance of investor sentiment in short-term IPO. The relationship between GMP and long-term performance, on the other hand, was low and statistically insignificant. This affirms the first optimism generally fades away when the market begins to focus on fundamentals. Measures such as VIX- percentage change and IPO size proved to be insignificant at the same time. associated with the short-term and long-term performance. This implies that the general market. volatility and issue size do not play a big role in determining the outcomes of an IPO especially when the market is generally stable. environment.

Regression Analysis

The long-run IPO performance regression model explained around 27.5 percent of the. change in outcomes, a medium but high degree of explanatory power. The main findings were: *GMP: Long term performance is significantly negatively related ($p < 0.05$). That is, very IPOs that are highly hyped are likely to fall in the future as the prices will stabilize at more realistic prices.
Listing Price: Strong positive effect, which means that IPOs that have good listing fundamentals and actual demand is a good long-term performer. VIX percent change and IPO size Both of them were statistically insignificant, implying that market. volatility and issue size were also not important in shortlisting long-run success. These results are consistent with the behavioral finance theories, which state that markets are prone to. correct themselves after being initially mispriced due to sentiment.

Chi-Square and ANOVA

The Chi-Square test (kh2 = 9.48, p = 0.002) revealed that there was a significant correlation between investors. IPO long-term performance and sentiment (GMP category). Specifically, initiated IPOs that were initiated. GMPs with very high GMPs were found to belong to the poor- performing group in the long run - enhancing the belief that pre-listing euphoria would lead to overvaluation. The ANOVA tests also indicated that there were significant differences in the IPO performance of. industries. In particular, the IPOs of technology and healthcare were superior to traditional ones. manufacturing companies because they had a better growth prospect and more optimism by the investors. with an investment in future earning power.

Discussion of Results

Overall, the results clearly point out that the short-term success of the IPO is sentiment based among investors, but the effect of this is lessened in the long run. Initial excitement can be based on high GMPs. and strong IPOs, yet a good deal of those IPOs cannot maintain their first wave as quickly as. speculative interest declines. Unlike other markets around the world, timing in the market is a factor in such activities as VIX and NIFTY. were by no means very important in the Indian situation. One of the reasons is the fact that Indian IPO market is a booming sector. high retail presence and stable liquidity which absorbs short term volatility. In brief, the success of IPOs in the long run is far more a factor of the company fundamentals and post. MOM is ranking above pre-listing hype. Strong business models encourage long-term growth. stable performance, and shareholder confidence - instead of short-term market euphoria.

Conclusion

The study examined the factors that determine Indian IPO long-term returns with a specialization. emphasize two elements - investor sentiments reflected by the Grey Market Premium (GMP). and market timing on the movements of the VIX and NIFTY. The findings indicate that investor sentiment plays a major role in the short-term success of IPO. High-GMP IPOs usually yield large returns on the listing day, which shows euphoria and optimism among investors. prior to the stock's trading. This influence diminishes with time. Often, IPOs were popularized. before being listed then depreciate as the market prices sink to the true fundamentals. Conversely, market timing variables like changes in VIX had very little influence on either short. long-term or term performance. This means that the IPO performance in India is preconditioned. company-related factors and the mood of investors instead of overall market fluctuations. The studies also indicate that the performance on the listing day, in particular, the listing price and initial. The good gauge of the long-term performance of the stock is known as returns. This indicates that true investor sentiment and good fundamental of the company are far more important than pre-listing speculation. Simply put, even though investor sentiment is the cause of the first enthusiasm and hot starts, the actual power of an is the cause of strength. IPO is in its fundamentals and post listing performance. GMP should be considered by investors. as a short-term measure but not as a long-term potential. For issuers, fair pricing and open communication is one of the most important, and regulators should continue to promote the practices that dampen. speculation and augment market integrity.

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