A REGRESSION BASED STUDY ON ANALYSIS OF SHORT TERM IPO PERFORMANCE IN INDIA

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ABSTRACT

In the dynamic and ever-changing landscape of initial public offerings (IPOs), understanding the factors behind the listing gains and short-term performance is crucial for both investors and market participants alike. This research deals with such factors determining the freshly-listed company's gains and short-term performance through a sample of 42 companies in the Indian Mainline IPO market that went public during the IPO Boom of 2023. Multivariate Regression Analysis is employed to study the effect of Grey Market Premium (GMP), Price-To-Earnings (PE ratio), and Indian Volatility Index (VIX) as significant determinants of listing gains, thereby stressing upon their role in shaping the short-term IPO performance. Furthermore, the analysis also reveals that while GMP, PE ratio, and VIX are strong predictors of listing gains, they prove to be insignificant in forecasting the short-term IPO performance over one or two-month periods. Instead, HNI (High-Net worth Individuals) subscription emerges as a major driver of short-term returns. The development of a final predictive model based on GMP, PE ratio, and VIX provides a valuable framework for assessment of IPO performance and contributes to a comprehensive understanding of the IPO pricing dynamics as it underscores the importance of market sentiment, valuation metrics, and investor behaviour in shaping IPO outcomes.

Keywords: IPOs, Listing Gains, Grey Market Premium, Indian Volatility Index, PE Ratio, HNI Subscription

JEL Classification: G10, G11, G12

INTRODUCTION

IPOs, or Initial Public Offerings, are when privately held companies offer shares to the public for the first time, allowing investors to buy ownership stakes. It can be regarded as a profitable investment opportunity for investors, who can invest into early-stage businesses with prospects for increased development, whereby the company could progressively provide bigger and better returns. Nevertheless, thorough due diligence is important to investigate the nature of the company's business model, its financial standing and the opportunities relevant to the organization to obtain maximum profits from IPO investments.

In 2023, India emerged as the global leader in IPOs, witnessing a surge in new stocks going public in the latter part of the year. The flow of IPOs was propelled by the higher market assessments, the availability of online trading platforms, and the increasing media publicity which saw a 22.4% YoY increase in registered investors who hit an eighty-fourth million. Whereas some IPOs observed massive listing gains, such as Tata Technologies (162.85%) and Idea Forge Technologies (92.78%); others failed to maintain investor interest, with stock prices going down after listing on the exchange as a result. Avalon Technologies saw a slide of 8.7% in the transaction price. Another stock to touch loss was IRM Energy losing 6.3%. The primary reason for the weak performance of the initial public offering was attributed to a negative market sentiment on the day. Yatra Online Ltd. Also witnessed a poor start to its IPO at a discount of 10 per cent. These disparities underscore the importance of understanding the drivers of immediate listing gains and short-term performance over a period of 1-2 months following the listing.

The surge in IPO activity is expected to continue well in 2024, driven by an urge to tap the capital markets pre-or post-Indian general elections, coupled with strong economic activity and positive investor sentiment. To capitalize on this growth, businesses must set their priorities on transparency, resilient governance, and innovative business models. Against this macroeconomic background, the paper aims to explore the trend of IPO listing performances in India during the FY23 surge, sourcing the data from 42 mainline Indian IPOs making their public offering in 2023 so as to decode the IPO performance dynamics.

LITERATURE REVIEW

This review analyses existing studies to elaborate the interplay between various independent variables and IPO outcomes, focusing on listing gains, 1-month returns, and 2-month returns. Subscription rates, reflecting investor enthusiasm for IPOs, are influenced by allocation and subscription proportions, issue attributes, and external factors (Sahoo & Rajib, 2010). Regulatory norms, such as allocation

quotas for qualified institutional bidders (QIBs), retail investors, and non-institutional investors (NIIs), shape subscription patterns (Sandhu & Guhathakurta, 2020). Oversubscription, attributed to investor confidence and optimism, is associated with higher QIB, NII, and retail allotments (Banerjee & Rangamani, 2015) and serves as a pivotal performance metric in determining listing and post-listing gains as well as pricing of IPOs. (Hawaldar et al., 2018).

Characteristics such as issue size, price of issue, promoter stake post IPO, and projected P/E ratio play pivotal roles in attracting investor interest. While larger issue sizes may signal success, the relationship between issue size and oversubscription remains debated (Arora & Singh, 2020; Ellikkal et al., 2022). Issue pricing, especially underpricing, influences demand, with lower-priced IPOs often garnering higher subscriptions (Aluvaala, 2019). Behavioural arguments suggest that over-enthusiastic investors may bid IPO prices beyond their fundamental values (Shah, 1995). External factors, including Grey Market Premium (GMP), and market index returns, significantly influence investor perceptions and decisions. GMP, derived from unofficial markets, reflects investor sentiment and impacts IPO demand significantly (Krishnamurti et al., 2011).

Analyses of IPO performance over time reveal varying patterns. Shah (1995) observed a remarkable 105.6% excess return over the issue offer price for IPOs between 1991 and 1995. Madhusoodanan and Thiripalraju (1997) found that Indian IPOs exhibited higher underpricing and long-term returns compared to international markets. Kakati (1999) reported short-run underpricing of 36.6% and long-term overpricing of 40.8% for IPOs between 1993 and 1996. Studies have proposed different strategies for IPO investment. Bagga, Khurana, and Singh (2012) recommended three strategies: selling all allotments on listing day, partial profit booking on listing, and holding for long term. They highlighted the significance of subscription rates in the short run and emphasized the importance of IPO objectives in the long run, particularly five years post-IPO (Jotwani and Singh, 2011). While previous studies have examined individual factors' impact, a comprehensive framework examining concurrent relationships is essential. This study aims to fill this gap by investigating the relationship between ten independent variables and IPO outcomes, providing valuable insights for investors and market analysts.

OBJECTIVES OF THE STUDY
- To investigate the factors determining IPO listing gains, focusing on both intrinsic (fundamental) factors and extrinsic (market sentiment) factors.

- To identify the most significant factor driving IPO listing gains and explore any potential interactions or dependencies among different factors influencing listing gains.

- To explore the factors relevant for IPO performance in a longer timeframe, examining the interplay between fundamental factors and market sentiments over time and assess the effectiveness of GMP in predicting IPO listing gains beyond the initial listing date.

RESEARCH METHODOLOGY

Variables Explanation

The current study focuses on three key metrics - listing gains, 1-month returns, and 2-month returns of IPOs serving as the primary measure of IPO performance. Ten independent variables are considered across 4 categories. Total Oversubscription comprises oversubscription across QIB, HNI, and Retail Categories, while Issue attributes include Promoter Holding Post Issue and Projected P/E Ratio, Fundamental Factors include Debt to Equity Ratio and Average 2 Year Revenue Growth of the company, while External Market Conditions consist of Grey Market Premium (GMP), Weekly Indian Volatility Index (VIX), and Index Returns (Sensex Past 1 Month Performance) reflecting the stock market performance.

Sample and Data Collection

The dataset includes 42 Indian Mainline initial public offerings (IPOs) launched between April and December 2023. Secondary data was collected from various online sources including the Draft Red Herring Prospectus (DRHP) available on the Securities and Exchange Board of India (SEBI) website, National Stock Exchange of India (NSE) and Bombay Stock Exchange (BSE) and financial portals such as Money Control, Yahoo Finance, and Trendlyne.

Tools used for Analysis

Microsoft Excel and R Software was employed for data analysis, with Multiple Linear Regression Model used to quantify the influence of the identified independent variables on the overall subscription of IPOs.

Estimation Model

The general estimation model used in the analysis is:

$$\text{Listing Gains/Returns} = \beta_0 + \beta_1 \text{Oversubscription by QIBs} +$$
$$\beta_2 \text{Oversubscription by HNIs} + \beta_3 \text{Oversubscription by Retail} +$$
$$\beta_4 \text{Market Volatility (VIX)} + \beta_5 \text{Grey Market Premium (GMP)} +$$
$$\beta_6 \text{Sensex Past One Month Return} + \beta_7 \text{PE Ratio} +$$
$$\beta_8 \text{2-Year Revenue Growth Rate} + \beta_9 \text{Debt-to-Equity Ratio} +$$
$$\beta_{10} \text{Post-IPO Promoter Holding} + \varepsilon$$

Where:

- Listing Gains/Returns represents the percentage of listing gains or returns of IPOs.
- β_0 is the intercept term.
- $\beta_1, \beta_2, \ldots, \beta_{10}$ are the coefficients of the independent variables.
- ε represents the error term.

OBSERVATIONS & RESULTS

Descriptive Statistics

A multivariable regression analysis was done to ascertain the most influential factors in predicting listing gains, with listing gains serving as the dependent variable (Y). The descriptive statistics revealed key insights into the variables under consideration (Table 1).

Table 1 – Descriptive Statistics for Listing gains (Dependent variable) and Independent variables

	Listing Gain	1mo Gain	2mo Gain	QIB	HNI	Retail	VIX	GMP	Sensex	PE	2Yr Rev	D/E	Promoter%
Mean	32.82	25.56	32.36	95.00	47.05	18.40	12.11	31.63	2.23	50.86	45.58	1.67	62.04
Standard Error	5.70	7.50	7.54	10.96	8.12	4.09	0.17	4.64	0.98	8.98	6.80	0.32	3.06
Median	21.75	12.35	17.91	104.76	34.44	9.80	11.99	28.59	2.37	33.16	38.75	0.89	66.65
Std_Dev	36.94	48.62	48.84	71.02	52.60	26.48	1.11	30.06	6.37	58.19	44.05	2.08	19.81
Variance	1364.93	2364.37	2385.10	5044.37	2766.36	701.35	1.24	903.90	40.58	3386.07	1940.69	4.32	392.52
Kurtosis	2.29	13.28	7.06	-1.24	15.30	9.68	0.17	-0.52	5.67	7.53	15.21	2.14	3.03
Skewness	1.41	3.10	2.08	0.17	3.25	2.95	0.63	0.74	-1.64	2.63	3.20	1.68	-1.63
Range	171.55	306.36	289.92	219.10	311.59	135.60	4.37	107.31	38.81	289.80	282.08	8.03	86.00
Minimum	-8.70	-45.60	-49.65	1.40	0.40	0.00	10.14	-5.50	-23.03	0.00	-15.02	0.00	0.00
Maximum	162.85	260.76	240.27	220.50	311.99	135.60	14.50	101.81	15.78	289.80	267.06	8.03	86.00

The average listing gains for the IPOs stand at 32.82%, closely mirroring the average GMP of 31.63%. This suggests a consistent premium observed in the grey market relative to the eventual listing gains. The range of listing gains spans from -8.7% to 162.85%, indicating a wide variation in performance of the IPOs. Notably, this range widens even further to -45.6% to 260.76% when examining one-month returns, underscoring the volatility and potential for significant fluctuations in short-term performance. The mean weekly volatility over the analysis period is measured at 12.11. The oversubscription rates vary significantly across investor categories, with QIBs experiencing the highest mean oversubscription at 95x, followed by HNIs at 47.05x and Retail investors at 18.4x. Finally, the average

PE ratio across the IPO sample is 50.86, with values ranging from 0 to 289, showcasing the diversity within the dataset in terms of valuation metrics.

Correlation Results

To assess multicollinearity, a correlation matrix was constructed comprising ten independent variables included in the model (Table 2). Upon examination, it was observed that while there was a slightly elevated correlation between GMP and subscription rates of different investor categories, all correlation coefficients remained below 0.9.

Table 2 – Pearson Correlation Matrix between Independent variables

	QIB	HNI	Retail	VIX	GMP	Sensex	PE Ratio	Revenue	D/E	Promoter
QIB	1									
HNI	0.580326	1								
Retail	0.361822	0.845969	1							
VIX	0.057443	0.054643	0.023399	1						
GMP	0.755626	0.727548	0.682501	0.204284	1					
Sensex	-0.08282	0.119464	0.186401	0.073895	0.005578	1				
PE Ratio	-0.0754	-0.09466	-0.05687	-0.23131	0.010432	-0.02667	1			
Revenue	-0.08842	0.020076	0.071612	0.235675	0.028894	0.146323	-0.00743	1		
D/E	-0.28081	-0.0417	0.099363	0.019049	-0.13741	0.222566	-0.01776	0.02424	1	
Promoter	0.354137	0.194675	0.201115	-0.02347	0.279175	-0.17825	0.028705	-0.20758	-0.01345	1

Additionally, the Variance Inflation Factors (VIFs) for each variable have been calculated, with all values falling below the threshold of 10 (Table 3). These results provide further validation for the absence of significant multicollinearity in the model ensuring the reliability of the regression analysis.

Regression Results

The findings reveal that among the variables, three emerged as statistically significant predictors of listing gains at a 95% confidence level: VIX, GMP, and PE Ratio.

Table 3 - Regression Summary Output between Listing Gains and Independent Variables

Regression Statistics	
Multiple R	0.878543
R Square	0.771837
Adjusted R Square	0.698237
Standard Error	20.29491
Observations	42

ANOVA

	df	SS	MS	F	Significance F

Regression	10	43193.54269	4319.354269	10.48683397093	0.000000187		
Residual	31	12768.38965	411.8835372				
Total	41	55961.93235					

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	VIF
Intercept	126.533952	41.048700	3.082532	0.004286	42.814576	210.253327	
QIB	0.011134	0.088140	0.126326	0.900290	-0.168628	0.190896	3.900842
HNI	-0.256434	0.138088	-1.857031	0.072831	-0.538066	0.025199	5.250855
Retail	0.218180	0.286469	0.761618	0.452044	-0.366077	0.802436	5.729290
VIX	**-9.967228**	**3.281047**	**-3.037820**	**0.004804**	**-16.658966**	**-3.275489**	**1.326671**
GMP	**1.255033**	**0.240616**	**5.215919**	**0.000012**	**0.764294**	**1.745772**	**5.209268**
Sensex	-0.012023	0.537334	-0.022375	0.982292	-1.107923	1.083877	1.166227
P/E	**-0.133800**	**0.058482**	**-2.287901**	**0.029122**	**-0.253074**	**-0.014526**	**1.152772**
Sales	-0.007568	0.076861	-0.098464	0.922197	-0.164326	0.149190	1.141233
D/E	0.927324	1.668940	0.555636	0.582448	-2.476503	4.331150	1.198685
Promoter %	-0.001483	0.181683	-0.008161	0.993541	-0.372027	0.369062	1.289718

The Weekly VIX is a measure of market volatility, reflecting investors' sentiment and uncertainty. The Negative coefficient indicates an inverse relationship with listing gains, suggesting that for every one-unit increase in the Weekly VIX, listing gains decrease by approximately 9.9672 percentage points. During periods of high volatility, investors may be more risk-averse, leading to reduced enthusiasm for new IPOs and lower initial gains. GMP represents the premium at which IPO shares are traded in the unofficial market before the official listing. Positive coefficient indicates a direct relationship with listing gains, suggesting that for every one-unit increase in the Grey Market Premium, listing gains increase by approximately 1.2550 percentage points. This relationship suggests that a strong demand for shares in the grey market prior to listing often translates into higher initial gains upon official listing. PE Ratio measures the valuation of a company's stock relative to its earnings. Negative coefficient suggests an inverse relationship with listing gains, indicating that for every one-unit increase in the PE Ratio, listing gains decrease by approximately 0.133 percentage points. This relationship implies that investors may be less willing to pay high premiums for IPOs with elevated PE ratios, expecting lower returns relative to earnings. The significant t-statistics and low p-value confirms the strength and validity of these relationships.

Upon analysing the predicted value versus residual plot (Figure 1), it is observed that the data points are scattered randomly around the x-axis without exhibiting any discernible pattern validating the assumptions of homoscedasticity and linearity in the regression model.

Figure 1 – Residuals vs Predictor Plot
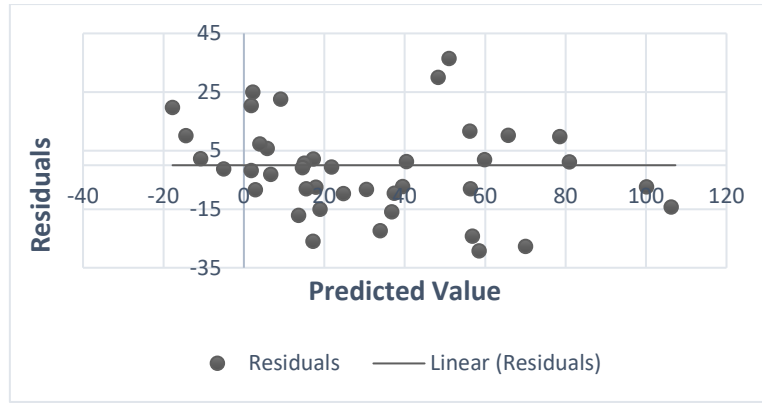
The line fit plots for each variable when analysed individually with the dependent variable (listing gains) reveal distinct relationships (Figure 2).

Figure 2 - Line Fitted Plots For Listing Gains and Independent Variables
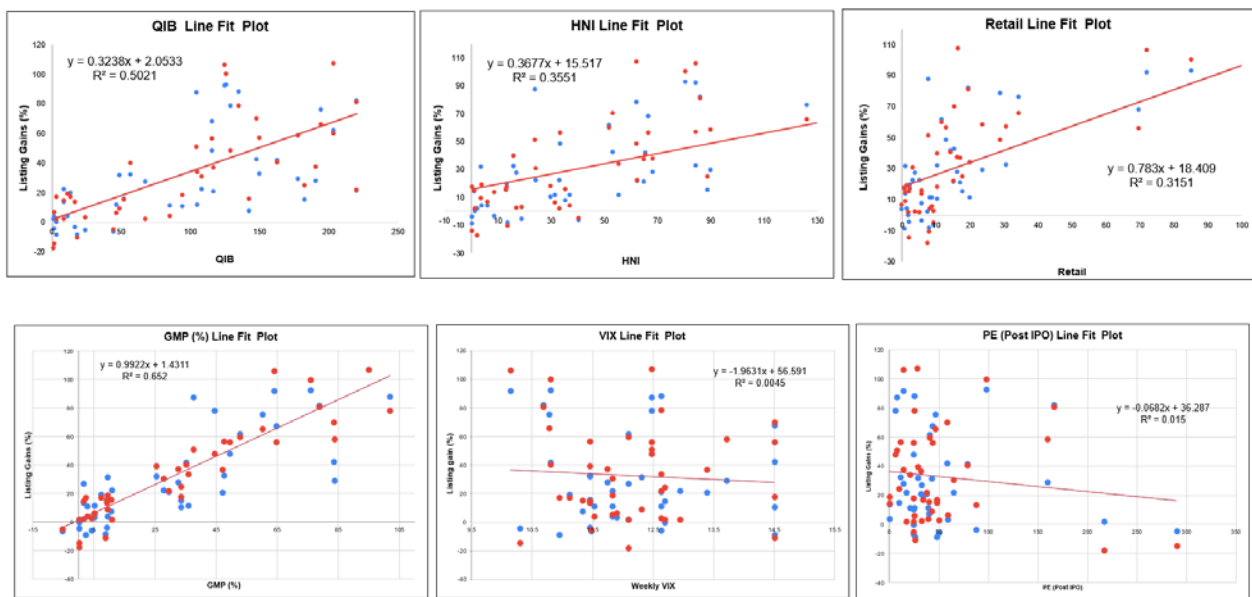
Oversubscription categories, including QIBs, HNIs, and Retail investors, exhibit positive associations with listing gains, indicating higher demand from these groups leads to increased initial gains upon IPO listing. Grey Market Premium (GMP) demonstrates a highly positive and significant relationship. Conversely, both the Volatility Index (VIX) and Price-to-Earnings Ratio (PE Ratio) display negative relationships, reflecting investor risk aversion and reduced willingness to pay high premiums for stocks with inflated valuations.

In light of the importance of Grey Market Premium (GMP) and its correlation with subscription categories, the Grey Market Premium (GMP) was regressed with respect to other independent

variables to understand the factors influencing GMP. The regression model yielded a notable adjusted R-squared value of 0.7540 and a highly significant F-test. Among the independent variables, three emerged as statistically significant determinants of GMP (Table 4).

Table 4 – Regression Output for GMP as Dependent variable

Regression Statistics	
Multiple R	0.898907
R Square	0.808034
Adjusted R Square	**0.754044**
Standard Error	14.910355
Observations	42.000000

ANOVA

	df	SS	MS	F	Significance F
Regression	9.000000	29945.567844	3327.285316	14.966288	0.000000
Residual	32.000000	7114.197640	222.318676		
Total	41.000000	37059.765484			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-63.866144	27.964798	-2.283805	0.029163	-120.828573	-6.903716
QIB	**0.254167**	**0.046631**	**5.450654**	**0.000005**	**0.159184**	**0.349150**
HNI	-0.037066	0.101239	-0.366119	0.716685	-0.243283	0.169152
Retail	**0.614919**	**0.180218**	**3.412080**	**0.001765**	**0.247827**	**0.982012**
VIX	**5.206064**	**2.227936**	**2.336721**	**0.025875**	**0.667907**	**9.744222**
Sensex	-0.246300	0.392363	-0.627735	0.534632	-1.045516	0.552917
P/E	0.064259	0.041437	1.550777	0.130790	-0.020145	0.148663
Sales	0.000049	0.056468	0.000874	0.999308	-0.114973	0.115071
D/E	-0.226883	1.225488	-0.185137	0.854290	-2.723121	2.269355
Promoter %	-0.058151	0.133083	-0.436950	0.665082	-0.329232	0.212930

QIB and Retail subscriptions exhibit positive relationships with GMP, as QIB and Retail investors typically represent a larger pool of individual investors often driving the initial enthusiasm and demand for an IPO, compared to HNIs. While higher volatility may indeed pose risks, it can also create opportunities for significant price fluctuations, including upside movements. The grey market being primarily dominated by speculatory forces showcases a positive relationship between market volatility (VIX) and GMP represented by a coefficient of 5.206. This could be attributed to investors' expectations of favourable price movements, despite the increased uncertainty.

The analysis now shifts towards investigating whether the variables deemed significant, including GMP, VIX, and Projected PE, are effective in predicting the short-term performance of IPOs over one and two-month periods. Separate regression analysis using one-month and two-month returns as the

dependent variables is conducted (Table 5 & 6 Regression Outputs). Surprisingly, in both cases, all three variables—GMP, VIX, and Projected PE—turned out to be insignificant. However, the HNI subscription category emerged as a significant factor, exhibiting a positive coefficient of 0.61 for one-month returns and 0.57 for two-month returns.

Table 5 – Regression Output for 1 Month Returns (%) as Dependent variable

Regression Statistics	
Adjusted R Square	0.42910
Standard Error	36.74000
Observations	42.00000

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	43.69773	74.31070	0.58804	0.56076	-107.85995	195.25540
QIB	-0.16224	0.15956	-1.01678	0.31713	-0.48766	0.16319
HNI	0.61822	0.24998	2.47306	0.01908	0.10838	1.12806
Retail	0.11129	0.51860	0.21461	0.83148	-0.94639	1.16898
VIX	0.05055	5.93970	0.00851	0.99326	-12.06355	12.16464
GMP	0.29293	0.43559	0.67249	0.50625	-0.59546	1.18132
Sensex	-0.32862	0.97274	-0.33783	0.73777	-2.31254	1.65529
P/E	-0.11349	0.10587	-1.07195	0.29202	-0.32941	0.10244
Sales	-0.03418	0.13914	-0.24563	0.80759	-0.31796	0.24960
D/E	-3.09448	3.02129	-1.02422	0.31366	-9.25645	3.06749
Promoter %	-0.49175	0.32890	-1.49512	0.14499	-1.16255	0.17905

*Table 6 – Regression Output for 2 Month Returns (%) as Dependent variable*

Regression Statistics	
Adjusted R Square	0.3498
Standard Error	39.3814
Observations	42.0000

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	54.6452	79.6532	0.6860	0.4978	-107.8086	217.0990
QIB	-0.1755	0.1710	-1.0264	0.3127	-0.5244	0.1733
HNI	0.5768	0.2680	2.1527	0.0392	0.0303	1.1233
Retail	0.0377	0.5559	0.0677	0.9464	-1.0961	1.1714
VIX	0.3138	6.3667	0.0493	0.9610	-12.6712	13.2988
GMP	0.3409	0.4669	0.7302	0.4708	-0.6113	1.2932
Sensex	0.6996	1.0427	0.6710	0.5072	-1.4269	2.8262
P/E	-0.0793	0.1135	-0.6991	0.4897	-0.3108	0.1521
Sales	-0.1055	0.1491	-0.7072	0.4847	-0.4097	0.1987
D/E	-3.9236	3.2385	-1.2115	0.2348	-10.5285	2.6814
Promoter %	-0.5510	0.3525	-1.5628	0.1283	-1.2700	0.1681

This suggests that while GMP, VIX, and Projected PE may be influential in initial pricing dynamics and listing gains, other factors such as investor sentiment, market movements and company specific news may play a more prominent role in determining short-term IPO performance. The figure below

showcases an increasing divergence of returns from the grey market premium as we move away from the listing day to a longer time horizon therefore showing an increase in unpredictability in returns due to GMP over a longer timeframe (Figure 3).

Figure 3 – Divergence of Actual Gains from GMP
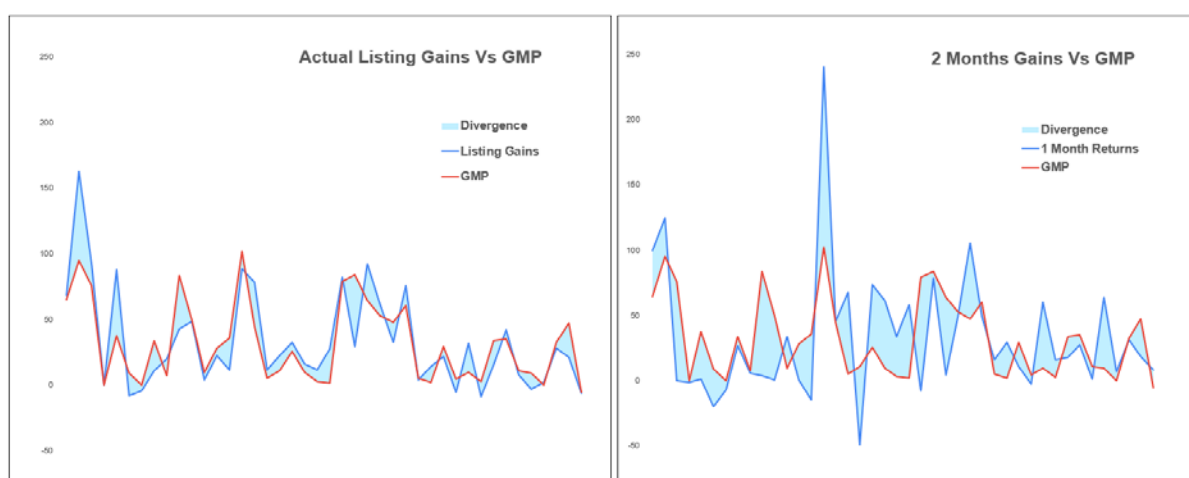
The noticeable drop in adjusted R-squared values to 0.42 for one-month returns and 0.34 for two-month returns indicates an increasing unpredictability in returns on holding IPO shares over these timeframes. While HNI subscription rates are not significant predictors of GMP, they came out to be significant in the listing gains analysis as they typically invest substantial amounts in IPOs and their participation signals confidence in the offering. Their presence in the subscription phase may not directly impact GMP but can significantly influence demand post-listing.

In order to refine the initial model for predicting listing gains, the focus was streamlined to the three most influential independent variables: GMP, VIX, and PE Ratio, while eliminating the insignificant factors. By leveraging the insights gained from the GMP regression analysis, it can be seen that the grey market premium effectively captures the impact of QIB and retail investors, therefore eliminating the need to consider them separately in the model. The regression output yielded an improved adjusted R-squared value of 0.714, surpassing the performance of the initial model, as evidenced by a significant F-value of 0.00 (Table 7).

Table 7 – Regression Output for Listing Gains (%) as Dependent variable with GMP, VIX and P/E Ratio

Regression Statistics	
Adjusted R Square	**0.71425**
Standard Error	19.74916
Observations	42.00000

ANOVA

	df	SS	MS	F	Significance F
Regression	3.00000	41140.81694	13713.60565	35.16045	0.00000
Residual	38.00000	14821.11541	390.02935		
Total	41.00000	55961.93235			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	116.71625	35.64729	3.27420	0.00226	44.55208	188.88042
VIX (IPO weekly)	**-9.22597**	**2.91584**	**-3.16408**	**0.00306**	**-15.12879**	**-3.32315**
PE Ratio (Post IPO)	**-0.11475**	**0.05458**	**-2.10236**	**0.04220**	**-0.22525**	**-0.00426**
GMP (%)	**1.06428**	**0.10499**	**10.13688**	**0.00000**	**0.85174**	**1.27682**

The coefficients obtained for VIX (-9.225), GMP (1.064), and PE Ratio (-0.114) enabled to formulate the final model as described below:

Listing Gains = 116.716 + 1.064(GMP in %) - 9.225(Weekly VIX) - 0.114(PE Ratio) + ε

*Figure 4 – Residuals vs Predictor Plot*

Importantly, all three factors were found to be statistically significant. Furthermore, the plot of predicted listing gains against standardized residuals (Figure 4) once again revealed a scatter pattern with no discernible trends around the x-axis, reaffirming the adequacy of the model.

DISCUSSION

This study delves into the relationship between various independent variables and the performance of initial public offerings (IPOs) within the Indian Mainline market during the fiscal year 2023, focusing on listing gains, 1-month returns, and 2-month returns. The investigation yielded significant findings,

some of which align with existing literature while others contribute fresh insights to the field. (Figure 5).

Figure 5 – Summary of Regression results

Conceptual Framework : Results of Multivariate Regression

Note : *p<0.05 ; **p<0.01 ; ***p<0.001
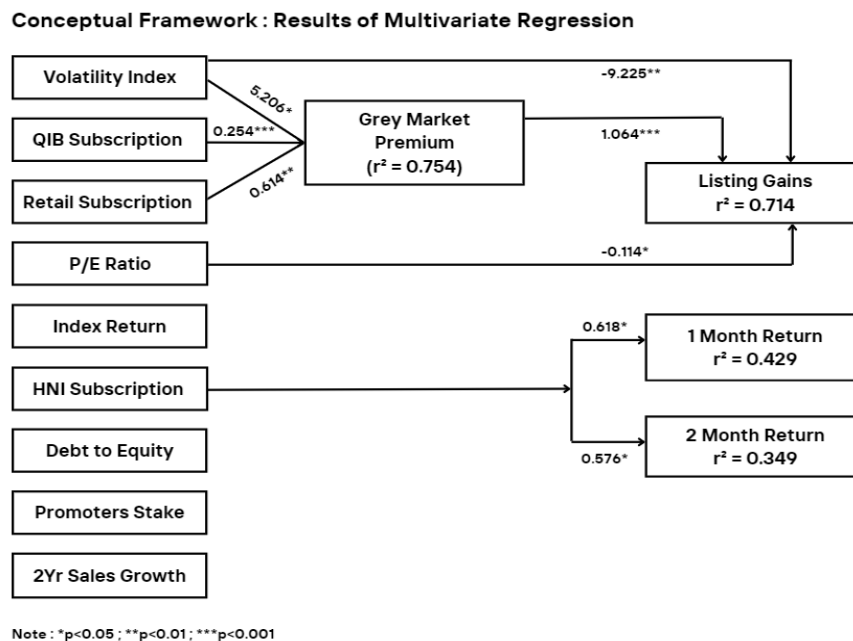
Firstly, the findings align with previous research indicating the significance of factors such as Grey Market Premium (GMP), price-to-earnings (P/E) ratio, and market volatility (VIX) in influencing listing gains. The analysis confirmed the positive relationship between GMP and listing gains, echoing the observations made by Ritter and Welch (2002). This underscores the impact of pre-IPO hype on initial listing gains, highlighting the importance of market sentiment in IPO pricing dynamics. Moreover, the study sheds light on the intricate relationship between GMP and oversubscription by different investor categories, particularly Qualified Institutional Buyers (QIBs) and Retail investors. This echoes the findings of Bagga, Khurana, and Singh (2012) regarding the role of subscription rates in the short run and IPO objectives in the long run. Additionally, the research corroborated the adverse effect of market volatility, measured by the VIX, on IPO performance, consistent with findings by Brav et al. (2007). Interestingly, while GMP emerged as a significant factor affecting listing gains, its impact diminished over the 2-month period, suggesting evolving investor sentiments post-listing.

Similarly, the influence of VIX and P/E ratio on IPO performance waned over time, indicating the dynamic nature of market conditions. Furthermore, the study unveiled a novel aspect concerning the influence of High Net-Worth Individual (HNI) subscription on short-term returns. We found that HNI participation positively contributes to post-listing stock prices, aligning with observations in emerging markets by Aggarwal (2017). However, the development of a predictive model based on GMP, P/E ratio, and VIX demonstrated limitations in predicting short-term returns, emphasizing the complexity of IPO dynamics.

CONCLUSION

In summary, this study advances the understanding of IPO pricing dynamics in the Indian context. Investors are recommended to closely monitor GMP for potential listing gains, while recognizing its diminishing impact over time. Market volatility, measured by the VIX, significantly affects IPO performance, necessitating consideration of broader market conditions. Investors should also consider the Price-Earnings ratio when evaluating IPOs as it provides valuable insights into the valuation of a stock relative to its earnings potential, helping investors judge whether an IPO is priced attractively. The study also highlights the distinct impact of investor categories: QIB and Retail Oversubscription drive immediate listing gains, evident in increased Grey Market Premiums, whereas HNI subscription offers stability over a longer horizon, contributing to sustained IPO performance beyond the initial listing phase. This underscores the importance of considering varied investor behaviours and subscription patterns for comprehensive IPO evaluation and investment strategies. Overall, the study emphasizes the need for a comprehensive approach to IPO analysis, integrating insights from market sentiment, valuation metrics, and investor behaviour to make informed investment decisions.

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