IPOs as Catalysts for Retail Investor Wealth Creation: Evidence from the Indian Stock Market

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Abstract
The study delves into the dynamics of wealth creation for retail investors in the context of Initial Public Offerings (IPOs) within the Indian equity markets. Against the backdrop of a burgeoning retail investor base, the research offers a comprehensive analysis spanning April 2012 to December 2022, evaluating short-term and long-term IPO performance metrics. The study reveals nuanced insights into wealth creation dynamics by scrutinizing listing day returns, first-week to third-year returns, and market-adjusted returns vis-à-vis the Nifty50 Index. Notably, the research suggests that while IPOs exhibit promise with positive listing day returns, sustaining growth over extended horizons poses challenges. The hypothesis of inflation serving as a pragmatic hurdle rate for retail investors is explored, offering a novel perspective on wealth preservation. It also sheds light on the significant variability in the Real Rate of Returns (RRRs) among IPOs, with some contributing to wealth generation while others result in wealth erosion. This underscores the importance of retail investors carefully assessing and managing risks, emphasizing the need for prudent portfolio diversification and effective risk mitigation strategies, particularly over longer investment horizons.[3]

JEL: G12, G15, G18, G23 **SDG:** SDG8, Target 8.A

Keywords: IPO Performance, Retail Investors, Short and Long-Term Returns, Market Adjusted Rate of Return (MARR), Wealth Creation

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1. INTRODUCTION

Initial Public Offerings (IPOs) constitute a pivotal juncture in the growth and evolution of companies, representing a significant milestone in their corporate development (Kartika & Putra, 2017). The initiation of an IPO signifies the company's maiden public issuance of shares, resulting in a profound restructuring of its capital framework and many advantages for investors, businesses, and underwriters alike. IPOs serve as indispensable instruments for resource allocation in market economies (Randolph & Jeffery, 1995). By attracting external capital through IPOs, corporations can secure the vital funding required to expand and innovate their products and services. This avenue is beautiful for enterprises with substantial current and future investment needs, positioning IPO fundraising as a viable strategy for capital acquisition (Dintha & Supriatna, 2019). Moreover, IPOs can potentially deliver favorable returns to investors, often attributed to prudent share pricing below intrinsic value during the IPO phase, allowing underwriters to orchestrate share sales at advantageous price levels (Munurung, 2012).

The Indian capital markets have undergone a remarkable transformation, emerging as a highly dynamic and promising investment arena. This transformation is fundamentally driven by the evolution of Initial Public Offerings (IPOs) (Ritter, 2015). IPOs represent the transition of privately held companies into the public domain, offering retail and institutional investors shares. They have consistently piqued the interest of retail and financial institutional investors due to their perceived potential for substantial wealth generation (Loughran & Ritter, 2002). The changing landscape of India's financial markets is characterized by the democratization of investment opportunities and the growing prominence of retail investors (Mishra & Pramanik, 2017).

The remarkable growth in the Indian IPO market is exemplified by the surge in retail investors holding demat accounts over three years. According to data from NSDL and CDSL, the total number of demat accounts reached an impressive 92.8 million as of April 2023. Notably, the surge in retail investors in India escalated from 35 million in March 2019 to 73.5 million by December 2021. This surge in retail participation in the Indian capital market can be attributed to the buoyant stock markets. The substantial increase in demat accounts over the past two years underscores the growing confidence of retail investors in India's economic potential. This study aims to delve into the performance of IPOs in fulfilling the overarching aspiration of wealth creation for retail investors in the Indian equity markets. The spectacular surge in retail investors and their growing confidence in India's economic potential, as evidenced by the surge in demat accounts, underscores the significance of analyzing the IPO mechanism as a wealth creation avenue for this burgeoning segment of investors.

2. LITERATURE REVIEW

By drawing on existing research findings and evidence, we aim to shed light on the dynamics of IPOs and their impact on the financial well-being of retail investors. However, the performance of IPOs and their role in wealth creation for retail investors is a topic of considerable debate and research. The review will explore various dimensions of IPO performance, such as examining initial returns, long-term returns, under-pricing, and post-IPO market performance. By evaluating these performance indicators, we can gain a deeper understanding of the factors influencing the success or failure of IPOs and their implications for retail investors. The empirical studies on the

performance of IPOs and their impact on the wealth creation of retail investors are presented systematically.

Studies on IPOs in India:

Pandey (2005) conducted a study titled "Initial Returns, Long Run Performance and Characteristics of Issuers: Differences in Indian IPOs Following Fixed Price and Book Building Processes." The research revealed that firms opting for fixed-price offerings tended to have a more significant capital proportion and raise smaller amounts of money, while those choosing book-building IPOs offered a smaller proportion of their stock to generate more significant sums of money. Additionally, fixed-price offerings exhibited higher and more uncertain initial returns than book-built IPOs.

Dolvin and Pyles (2007) explored the seasonal dynamics of IPOs in their study, identifying a high level of underpricing for IPOs launched during the fall and winter periods. The research also highlighted the influence of buyers' emotions on IPO pricing.

Paleari and Vismara (2007) focused on post-IPO growth in their study, finding that it was lower than expected. Forecast errors were attributed to forecasted growth, market sentiment, and firm size.

Sahoo and Rajib (2010) analyzed 92 IPOs issued from 2002 to 2006, uncovering significant insights into the Indian IPO market. The study revealed that Indian IPOs were underpriced by 46.55% on the listing day compared to the market index. Investors who subscribed directly to the IPOs earned positive returns over 36 months. In contrast, investors who bought IPOs on the listing day experienced negative returns for up to 12 months before achieving positive returns.

International Studies on IPO Performance:

Goergen, Khurshed, and Mudambi (2007) conducted a study titled "The long-run performance of UK IPOs: Can it be predicted?" focusing on 252 initial public offerings listed on the London Stock Exchange from 1991 to 1995. Their findings indicated that UK IPOs, particularly smaller firms, exhibited poor long-run performance. In contrast, larger firms' IPOs performed comparatively better in a cross-sectional analysis. These consistent findings, aligning with the research by Burrows and Jones (2004) on Alternative Investment Market (AIM3) IPOs, highlight the challenges smaller firms face. The importance of considering firm size in analyzing IPO performance is emphasized.

Carter, Dark, Floros, and Sapp (2011) contributed to understanding IPO long-run returns by characterizing associated risks. Their study, titled "Characterizing the Risk of IPO Long-Run Returns: The Impact of Momentum, Liquidity, Skewness, and Investment," covered the period from 1981 to 2005. The research revealed that the New Issue Puzzle could vanish when analyzed within the Fama-French three-factor framework. The study employed various methodologies, including Cumulative Returns, Portfolio Time Series Factor Regression, and Robustness Tests to evaluate long-term risk characteristics. Larger firms outperformed in the long run, with momentum, investment, liquidity, and skewness identified as significant factors influencing aftermarket returns. The study suggested that IPO investors might face lower expected returns due to negative momentum and investment exposure but benefit from increased liquidity.

Studies on IPO Grading and Listing Performance

Garima (2013) conducted a study titled "Comparative Analysis of Listing Price Performance Between Different Graded IPOs in India," the hypothesis was that highly graded IPOs would demonstrate better listing price performance if the grading mechanism were effective. However, the study's results contradicted this expectation, indicating that IPO grading did not effectively reduce information asymmetry. Moreover, the study found a significant level of underpricing persisting in the Indian IPO market. The One-Way ANOVA analysis results showed no significant difference in the listing price performance among different graded IPOs. Therefore, the listing price performance of graded IPOs appeared to be influenced by factors such as subscription level, issue size, age of the company, or chance rather than the level of grades obtained.

Mittal, Gupta, Sharma et al. (2013) explored IPO performance across sectors and time frames. Their study revealed that public sector stocks performed well in the short and long run, outperforming other sectors. In contrast, the manufacturing sector exhibited the weakest performance in both time frames.

Short and Long-Term Performance of IPOs in India:

Murthy and Singh (2014) focused on the short-run performance of the IPO market in India. Their analysis covered 30 days and empirically tested the short-term performance of a sample of 89 IPO firms that entered the market between 2006 and 2009. The findings indicated that while many IPOs generated significant returns on the day of listing, their short-term performance after that was not substantial. This observation suggested that the market tended to overreact to initial public offers.

Shah and Mehta (2015) explored the initial performance of IPOs in India from 2010 to 2014. The study focused on listing day performance using a sample of 113 companies. They found a positive average return on the listing day compared to historical IPO returns. The researchers employed a regression model to examine the relationship between underpricing and variables such as issue price, size, oversubscription, and market index returns. The study concluded that investors could benefit from investing in underpriced new issues during their initial days.

Sridevi, Torsa Sinha, Olipriya Mukherjee, and Ankit Sharma (2017) investigated the long-term performance of IPOs listed on the NSE from 2004 to 2016. Their analysis of stock returns on an annual basis assumed equal investment in all IPOs listed on the Indian stock exchange for the respective listing year. The findings revealed that this approach yielded more significant cumulative annual returns from IPOs than the Nifty index's cumulative annual returns during the study period. The study suggested that investing in IPOs for the long term could be a profitable strategy.

Factors Influencing IPO Investment

Khan, Zeeshan, Ahmad, Alakkas, and Farooqi (2021) conducted a study on the Stock Performance of Select IPOS in India. Their findings emphasized that underpriced initial public offerings (IPOs) tend to yield higher returns. This phenomenon is attributed to the closing price on the listing day being higher than the issue price ($Po > P1$), contributing to increased demand and maintaining price stability in the secondary market. The study highlighted that underpricing creates a sense of urgency among investors, prompting them to buy shares to avoid missing out on the opportunity

for a quick profit. However, the study cautioned that underpricing is not a guaranteed indicator of success; the company's fundamentals must still be sound, and the market environment must be favorable.

Recent Studies on IPO Performance

Adil Ellikkal, Rajamohan, and Om Prakash (2022) conducted a study titled "IPOs in the Indian Stock Market: Analyzing Pricing and Performance of IPOs Listed in 2021." The research revealed that high-demand IPOs experienced over-subscription and listing day gains, leading to average returns of 53.85%. Investing in these IPOs demonstrated outperformance compared to broader indices. Companies like Paras Defense benefited from government programs and demonstrated export potential. However, some IPOs, such as Car Trade and Small Finance Bank, experienced negative returns. This study focused on leading players and worst performers, suggesting potential avenues for future research on investor allocation patterns.

Mary Brooke Billings, Kevin Hsueh, Melissa Lewis-Western, and Galadriel Shobe (2022) explored "Innovations in IPO Deal Structure: Do Up-C IPOs Harm Public Shareholders?" The study delved into the controversial Umbrella Partnership Corporation (Up-C) IPO structure, often perceived to enhance post-IPO value and address concerns about the decline in publicly traded companies. Contrary to previous assumptions, their analysis of a larger and more recent sample of Up-C IPOs revealed negative stock performance and a higher incidence of post-IPO litigation than non-Up-C IPOs. This suggests that Up-C deals may harm public shareholders, as pre-IPO owners may exploit the deal structure. These findings contribute empirical evidence to the ongoing debate about the drawbacks associated with Up-C structures.

Metin Ilbasmıs (2023) contributed to the literature with a study titled "Underpricing and Aftermarket Performance of IPOs during the Covid-19 Period: Evidence from the Istanbul Stock Exchange." This research examined the influence of Covid-19 and uncertainty proxies on underpricing and aftermarket performances. The study controlled for various firm, industry, and market-level variables and found that IPOs launched during the COVID-19 period experienced higher levels of underpricing. However, on average, older IPO firms had more assets, generated more enormous proceeds, and traded more actively on their first trading day. They were expected to exhibit lower post-IPO volatility and tended to have more minor levels of underpricing during their initial public offerings. The empirical analysis further demonstrated that IPO firms observed significantly higher short-term market-adjusted abnormal returns during the pandemic than before.

Despite the wealth of research on various aspects of initial public offerings (IPOs), a notable gap exists when examining their direct impact on the financial well-being of retail investors, particularly in the Indian context. While numerous studies have explored IPO performance, underpricing, and even the motivations behind companies going public, a comprehensive analysis specifically focused on how IPOs contribute to wealth creation for retail investors remains conspicuously absent. Given the evolving dynamics of IPOs and their potential to shape the financial futures of individual investors, this study aims to bridge this crucial gap by providing a thorough examination of both short-term and long-term IPO performance, thus shedding light on their wealth-creation potential for retail investors in the Indian stock market.

3. OBJECTIVES OF THE STUDY

Analyze the short-term and long-term performance of IPO stocks.

Appraise the Wealth Creation Potential of IPOs for Retail Investors

4. RESEARCH DESIGN AND METHODOLOGY:

The present study is explorative and analytical. It uses secondary data and is based on the 254 companies that went for IPOs from April 2012 to December 2022 on the main board of the NSE Platform in the Equity segment. To evaluate post-IPO performance for short-term and long-term periods and assess their contribution to wealth creation for retail investors, the data was collected from the NSE database and MCA-21 through the Ministry of Corporate Affairs.
This comprehensive assessment of the IPO performance of companies listed on the National Stock Exchange (NSE) from April 2012 to December 2022 is presented. During this period, 266 IPOs and FPOs offered through book-building were issued on the NSE, out of which 6 IPOs were withdrawn, 2 were FPOs, and 4 IPOS did not have data. Therefore, the remaining 254 IPOs were considered for analysis in our research.

To analyze various attributes in the performance of an IPO. The study investigates the various attributes Viz: listing day return (lr), First-week return (1wr), Second-week return (2wr), third-week return (3wr), First-month return (1mr), second-month return (2mr), third-month return (3mr), fourth-month return (4mr), fifth-month return (5mr), sixth-month return (6mr), first-year return (1yr), second-year return (2yr), and third-year return (3yr)

5. STATISTICAL TOOLS FOR DATA ANALYSIS

Descriptive statistics mean, standard deviations, skewness, kurtosis, Jarque-Berra normality test, etc. Further, the Market Adjusted Rate of Return (MAAR) and Real Rate of Return (RRR)

5.1 To measure the performance of the IPO, the return calculation on the day of listing, on a weekly, monthly, and annual basis, is done with the following formula.

$$\mathbf{Ri = Ln\ (Pit/\ Pit\text{-}1)\ *100} \quad \text{----------I}$$

Where:

i. Ri = Return of i^{th} IPO's Listing Day, Weekly, Monthly, and Annual
ii. Pit-1 = Issue Price of i^{th} IPO
iii. Pit = i^{th} IPO's Listing Day, Weekly, Monthly, and Annual Closing Price
iv.

$$\mathbf{Rm= Ln\ (Pmt/\ Pmt\text{-}1)\ *100} \quad \text{----------II}$$

i. Rm= Return on Market (NSE Nifty) on i^{th} IPO's Listing Day, Weekly, Monthly, and Annual
ii. Pmt-1 = Market Value of Index (NSE Nifty) on i^{th} IPO Issue Allotment Day
iii. Pmt = Market Value (NSE Nifty) of i^{th} IPO's Listing Day, Weekly, Monthly, and Annual Closing Price

5.2 Market Adjusted Abnormal Rate of Return (MAAR) OR Buy and Hold Abnormal Return (BHAR) (Thomadakis et al., 2007)

MAAR= Ri – Rm---------- III

5.3 Real Rate of Return (RRR)

RRR= Nominal Rate of Return – Inflation rate in the economy------IV

6. DATA ANALYSIS

The surge in retail investors within the Indian financial landscape has been remarkable, with their numbers surging from 35 million in March 2019 to a staggering 92.8 million by April 2023. This remarkable growth can be attributed to the fervent enthusiasm surrounding the buoyant stock markets. However, as this phenomenon unfolds, a pressing need arises to scrutinize the performance of Initial Public Offerings (IPOs) as a pivotal mechanism for wealth creation among retail investors.

Considering these developments, our research analyzes the short-term and long-term performance of IPOs listed during the study period. The Various parameters considered for evaluating the performance of IPOs are listing day return (lr), First-week return (1wr), Second-week return (2wr), third-week return (3wr), First-month return (1mr), second-month return (2mr), third-month return (3mr), fourth-month return (4mr), fifth-month return (5mr), sixth-month return (6mr), first-year return (1yr), second-year return (2yr), and third-year return (3yr) will be analyzed. Additionally, market returns during IPO listings and at various intervals (weekly, monthly, and yearly) will be calculated by considering the Nifty50 Index. The market and IPOs' performance will be evaluated by calculating the market-adjusted return, which provides insights into whether the IPO outperformed or underperformed the market during specific holding periods.

6.1 SHORT-TERM AND LONG-TERM IPO PERFORMANCE

A descriptive analysis was conducted on listing day returns, weekly returns, monthly returns, and yearly returns, and the results are presented in Table 1 below.

Inferences:

Table 1 presents the average listing day returns (lr) of 254 IPOs at 16.06%. This indicates the typical percentage increase in value on the first trading day. The median listing day return is 10.36%. The highest listing day return observed is 229.61%. The lowest listing day return observed is -32.03%. The listing day returns exhibit a standard deviation of 28.90%. This indicates a wide dispersion of returns, suggesting that the performance of IPOs on their listing day can vary significantly.

The analysis of the first-week return (1wr) for the 254 IPO-listed companies during the study period revealed an average return of 16.28 percent, which suggests a lack of significant growth compared to the average listing day return of 16.06 percent. The highest recorded return during the first week was 220.94 percent, while the lowest was -63.58 percent. The standard deviation of 31.9 percent indicates a notable variability in returns during this period. The positive skewness value of 1.82 implies the potential existence of more extreme positive returns. Similarly, the average second-week and third-week returns were 16.11 percent and 16.22 percent, respectively, indicating a lack of substantial growth compared to the average listing day return.

Upon analysis, it is observed that the returns on the listing day are 16.06%, which appears promising. However, the subsequent returns during the first week (16.28%), second week (16.11%), and third week (16.22%) show minimal variations and do not exhibit significant growth. This trend continues with the first-month return (15.29%), indicating limited returns even after the initial trading phase.

The lack of substantial growth becomes more apparent when considering longer time horizons. After three months, the returns stand at 17.92%, while after one year, they reach 18.44%. Although slightly higher, these figures do not adequately reward long-term retail investors' patience. The situation worsens after three years, with returns dropping to -6.52%. This observation suggests that retail investors with a long-term perspective might not receive satisfactory returns on their investments. The returns are not proportionate to the time and effort invested, making it less favorable for long-term retail investors than day traders who may benefit from short-term fluctuations.

6.2 ANALYSIS OF RETURNS OF IPOS ACROSS PERIODS

This analysis examines the range of returns for the sample of IPO companies. The returns are assessed at different intervals, including the listing day, first week, second week, and subsequent periods. The returns are then categorized into various ranges, capturing the performance of companies that earned returns exceeding 200%, 100-200%, 50-100%, 21-50%, 11-20%, 0-10%, 0 to -10%, -11% to -50%, and returns below -50%.

Table 1: Descriptive Statistics of Listing Day, Weekly, Monthly & Yearly IPO Returns

	Mean	Median	Max	Min	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob	Sum	Sum Sq. Dev.	Observations
lr	16.06	10.36	229.61	-32.03	28.90	2.41	14.82	1725	0.00	4078	211349	254
1wr	16.28	9.68	220.94	-63.58	31.91	1.82	10.26	697	0.00	4134	257576	254
2wr	16.11	11.50	210.96	-59.90	32.24	1.63	8.79	468	0.00	4091	263049	254
3wr	16.22	9.87	218.44	-45.89	33.40	1.92	10.47	747	0.00	4121	282212	254
1mr	15. 29	12.89	209.92	-54.42	32.84	1.58	8.83	466	0.00	3884	272785	254
2mr	16.45	14.87	204.32	-82.81	35.49	1.05	6.31	163	0.00	4177	318651	254
3mr	17.92	16.80	219.05	-86.36	40.03	0.95	5.57	108	0.00	4552	405355	254
4mr	19.03	16.84	209.19	-102.03	42.70	0.59	4.60	42	0.00	4835	461397	254
5mr	20.29	16.88	199.40	-124.84	45.29	0.38	4.09	18	0.00	5092	512718	251
6mr	20.80	21.23	186.25	-133.11	47.80	0.27	3.54	6	0.05	5116	559769	246
1yr	18.44	20.55	219.85	-232.28	61.74	-0.24	4.07	13	0.00	4223	869052	229
2yr	13.69	20.45	283.75	-243.32	82.93	-0.19	3.35	1	0.39	2313	1155424	169
3yr	-6.52	11.58	200.88	-298.97	99.28	-0.67	3.34	11	0.00	-899	1350304	138

Source: Researchers' Calculation using MCA-21 & NSE data

Table 2: Range of Returns of IPO companies during 2012-2022 across periods

Returns	<-50%		-11 to -50%		0 to -10%		0-10%		11-20%		21-50%		50-100%		100-200%		>200%		N
Period	no. of IPOs	%	no. of IPOs	%	no. of IPOs	%	no. of IPOs	%	no. of IPOs	%	no. of IPOs	%	no. of IPOs	%	no. of IPOs	%	no. of IPOs	%	
lr	0	0	24	9	57	22	46	18	37	15	62	24	25	10	2	1	1	0	254
1wr	1	0	37	15	51	20	39	15	25	10	70	28	26	10	4	2	1	0	254
2wr	1	0	47	19	40	16	35	14	32	13	71	28	22	9	5	2	1	0	254
3wr	0	0	45	18	51	20	32	13	25	10	73	29	22	9	5	2	1	0	254
1mr	1	0	50	20	38	15	33	13	34	13	70	28	23	9	4	2	1	0	254
2mr	4	2	51	20	32	13	27	11	35	14	71	28	29	11	4	2	1	0	254
3mr	4	2	55	22	33	13	20	8	27	11	72	28	36	14	6	2	1	0	254
4mr	8	3	56	22	22	9	27	11	24	9	65	26	43	17	0	0	0	0	254
5mr	12	5	50	20	21	8	23	9	26	10	59	24	49	20	11	4	0	0	251
6mr	13	5	55	22	15	6	17	7	19	8	65	26	49	20	13	5	0	0	246
1yr	28	12	39	17	15	7	18	8	12	5	49	21	52	23	15	7	1	0	229
2yr	35	21	21	12	9	5	5	3	14	8	29	17	35	21	19	11	2	1	169
3yr	37	27	20	14	5	4	5	4	11	8	18	13	25	18	16	12	1	1	138

Source: Researchers' Calculation using MCA-21 & NSE data

Inferences

Table 2 above provides the breakdown of returns for various periods, ranging from the listing day to the third year. The Initial Performance lr (Listing Day Returns) column shows that there were no observations with returns below -50% on the listing day. This indicates that extreme negative returns were not expected during the listing period. 1wr (First Week Returns) column also shows a similar pattern, with only one observation falling below -50%. However, the number of observations with returns between -11% and -50% increases compared to the listing day, indicating a slightly higher likelihood of negative returns during the first week.

When we look at the Volatility and Long-Term Performance, the number of observations with higher positive returns (above 100% and 200%) tends to be smaller than those in the 0% to 10% range. This suggests that achieving exceptional returns of over 100% or 200% is rare. As we move towards longer periods (from listing day to third year), the number of observations decreases. This decline is likely due to various factors, such as increased volatility, market fluctuations, and the possibility of companies not sustaining their initial performance in the long run.

It also highlights the variability of returns across different periods. For example, in the 2mr (Second-Month Returns) column, the number of observations in the 0% to 10% range decreases compared to the first month, while the number of observations in the 11% to 20% range increases. This indicates a shift in returns during the second month. Similarly, as we move from the first month to the third month and beyond, the distribution of returns can fluctuate, highlighting the dynamic nature of investment performance over time.

6.3 MARKET ADJUSTED RATE OF RETURN

The market-adjusted rate of return, also known as the abnormal rate of return, measures the excess return of an IPO (Initial Public Offering) compared to the overall market. It reflects the performance of the IPO beyond what can be explained by general market movements. The calculation of market-adjusted return typically involves subtracting the market return from the IPO's actual return. The market-adjusted rate of return provides insights into whether the IPO outperformed or underperformed the market during the specific holding period. A positive market-adjusted return indicates that the IPO generated higher returns than the market average, suggesting a potentially successful investment. Conversely, a negative market-adjusted return suggests underperformance relative to the market. The market-adjusted rate of return is valuable for assessing the IPO's performance to the overall market conditions. It helps investors and analysts to gauge the IPO's ability to generate excess returns by considering market influences and trends. Additionally, it allows for comparisons between different IPOs and provides a basis for evaluating the effectiveness of IPO investment strategies. An attempt is made to calculate the Market Adjusted rate of return of 254 IPOs with the market return in the below table-3

Table 3: Descriptive Statistics of Market Adjusted Rate of Return of IPOs from 2012-2022

Market Returns	Mean	Median	Max	Min	Std. Dev.	Skewness	Kurtosis	Jarque-Bera	Prob.	Sum	Sum Sq. Dev.	Observations
marl	15.91	9.19	207.47	-30.62	27.92	2.17	12.14	1084.01	0.00	4042.12	197247.90	254.00
marw1	15.93	10.82	198.65	-66.27	31.02	1.68	8.87	484.82	0.00	4047.24	243472.20	254.00
marw2	15.48	10.58	186.81	-61.56	31.06	1.52	7.77	339.21	0.00	3931.97	244072.00	254.00
marw3	15.37	9.55	195.96	-47.69	32.46	1.84	9.71	620.38	0.00	3904.89	266552.30	254.00
marm1	14.16	9.45	184.25	-50.61	31.80	1.49	7.77	334.08	0.00	3597.66	255832.30	254.00
marm2	14.16	10.50	178.00	-75.24	34.23	0.98	5.64	114.55	0.00	3595.50	296372.60	254.00
marm3	15.34	11.73	191.75	-82.73	38.10	0.91	5.28	89.92	0.00	3896.16	367338.20	254.00
marm4	15.75	12.67	178.12	-107.43	40.31	0.54	4.45	34.55	0.00	4000.25	411137.90	254.00
marm5	16.38	14.20	172.49	-123.54	43.08	0.37	4.15	19.56	0.00	4112.22	464027.30	251.00
marm6	16.64	14.93	161.83	-123.77	45.67	0.20	3.51	4.40	0.11	4093.11	510969.50	246.00
mary1	8.57	10.24	173.92	-237.81	59.14	-0.38	4.02	15.03	0.00	1918.88	779898.80	224.00
mary2	-6.77	0.81	236.68	-260.79	78.32	-0.30	3.38	3.55	0.17	-1143.31	1030530.00	169.00
mary3	-35.46	-25.35	204.00	-295.97	96.64	-0.53	3.24	6.83	0.03	-4893.47	1279452.00	138.00

Source: Researchers' Calculation using MCA-21 & NSE data

Inferences

Table 3 provides the mean Market Adjusted Rate of Return on Listing Day (marl) is 15.91 %. This indicates the average excess return of IPOs compared to the market benchmark on the listing day. The median marl is 9.19%. This represents the middle value of the distribution and suggests that 50% of the IPOs had a marl below 9.19%. The highest marl observed is 207.47%, indicating a significant positive market-adjusted return, while the lowest is -30.62%, indicating underperformance. The standard deviation of marl is 27.92%, indicating a wide dispersion of returns around the mean. Similarly, market adjusted rate of return for first-week, second-week, third-week, first-month, second-month, third-month, fourth-month, fifth-month, sixth-month, first-year, second-year, and third-year follows the same pattern as marl. Thus, it provides insights into their performance compared to the market benchmark.

6.4 ANALYSIS OF IPO PERFORMANCE USING MARKET-ADJUSTED RATE OF RETURN

The market-adjusted rate of return allows us to evaluate the relative performance of IPOs by considering their returns in comparison to the overall market performance. The market-adjusted rate of return determines whether the IPOs have outperformed or underperformed the market. A positive market-adjusted rate of return indicates that the IPOs have exhibited superior performance compared to the market. Conversely, a negative market-adjusted rate of return suggests that the IPOs have underperformed relative to the market.

Table 4 Analysis of IPO Performance using Market Adjusted Rate of Return

Particulars	Total Sample	Market Adjusted Return Positive (%)	Market Adjusted Return Negative (%)
marl	254	69	31
marw1	254	65	35
marw2	254	65	35
marw3	254	62	38
marm1	254	61	39
marm2	254	65	35
marm3	254	65	35
marm4	254	65	35
marm5	251	62	38
marm6	246	63	37
mary1	224	57	43

mary2	169	50	50
mary3	138	37	63

Source: Researchers' Calculation using MCA-21 & NSE data

Inferences

Table 4 examines the market-adjusted returns observed in 254 initial public offerings (IPOs) over varying time intervals, encompassing the period from the IPO listing day to the third year following the IPO. Among the total sample of IPOs, it was observed that 69% exhibited a positive market-adjusted return on the listing day, while 31% demonstrated a negative market-adjusted return. Subsequently, an average of 64% of IPOs displayed positive market-adjusted returns during the first week to the sixth month after listing. However, as the IPOs progressed beyond the first year, the percentage of IPOs with positive market-adjusted returns experienced a decline. By the end of the first year, 57% of IPOs demonstrated positive market-adjusted returns. This declining trend persisted, with 50% of IPOs exhibiting positive returns by the end of the second year and 37% by the end of the third year.

These findings emphasize the dynamic nature of IPO performance, with a majority of IPOs showcasing positive market-adjusted returns in the initial stages. However, over time, the proportion of IPOs outperforming the market has notably decreased. This analysis provides valuable insights into the trajectory of IPO performance and underscores the importance of considering different time intervals for a comprehensive assessment.

It is important to note that market-adjusted returns serve as a key indicator of IPO performance, enabling a critical evaluation of their relative success or underperformance. These insights contribute to understanding IPO dynamics and aid in informed decision-making for investors, issuers, and regulators.

6.5 WEALTH CREATION FOR RETAIL INVESTORS

In the realm of finance and investment, the pursuit of wealth creation remains a paramount objective for retail investors as they endeavor to secure their financial future and achieve life goals. Retail investors constitute a significant segment of the investment landscape, and their journey toward wealth creation involves meticulous planning, prudent decision-making, and the pursuit of returns that exceed predefined expectations. At the heart of this endeavor lies the concept of the hurdle rate or required rate of return, a cornerstone principle deeply rooted in financial theory.

The notion of the hurdle rate finds its roots in the pioneering works of esteemed economists and financial theorists. It represents the minimum rate of return that investors demand to justify allocating their capital to a particular investment. As elucidated by Nobel laureate William F. Sharpe (1964), this concept underpins modern portfolio theory (MPT) foundations and serves as a pivotal criterion for making asset allocation decisions. This fundamental premise has driven the growth and transformation of financial markets, ushering in an era where wealth creation is attainable for discerning retail investors.

This research paper embarks on a comprehensive exploration of wealth creation within the realm of retail investors, shedding light on the profound impact that exceeding the hurdle rate can have on an individual's financial prosperity. Drawing inspiration from the works of financial luminaries such as Eugene Fama (1970) and Robert James Shiller (1981), who have significantly contributed to understanding asset pricing and market efficiency, this study aims to unravel the intricate dynamics that govern the wealth creation process. Through rigorous empirical analysis, we provide a comprehensive perspective on how retail investors can navigate the complex financial landscape, preserving their purchasing power and realizing the aspirations of wealth generation.

In the ensuing sections, we engage in a scholarly discourse encompassing financial luminaries' wisdom, efficient markets' principles, and empirical evidence from real-world investment scenarios. Through this comprehensive analysis, we aim to equip retail investors with the knowledge and tools to make informed investment decisions, thereby unlocking the potential for wealth creation in their financial journey. Within this paradigm, we propose a paradigm shift, suggesting that, for retail investors, the hurdle rate could effectively align with the inflation rate, serving as a critical reference point in their pursuit of sustainable wealth creation. In an ever-evolving financial landscape, this perspective offers a fresh lens through which retail investors can navigate the complexities of wealth generation, ensuring their financial aspirations remain resilient in the face of inflationary pressures."

In the scope of our research, we endeavor to ascertain the real rate of return (RRR) as a fundamental metric for assessing the wealth creation dynamics of retail investors. Recognizing that inflation serves as a pragmatic hurdle rate for retail investors, our primary objective is to discern whether these investors are, indeed, generating wealth from their investments in Initial Public Offerings (IPOs). To achieve this, we employ a method wherein the real rate of return is computed by deducting the prevailing inflation rate from both monthly and yearly investment returns. A positive monthly real rate of return signifies wealth creation in the short term, while a positive yearly rate of return indicates wealth creation over an extended horizon. Within this framework, we present the descriptive statistics of the real rate of return for both monthly and yearly investment returns in the subsequent table 5. Here the first-month real rate return (RRRM1), second-month real rate return (RRRM2), third-month real rate return (RRRM3), fourth-month real rate return (RRRM4), fifth-month real rate return (RRRM5, sixth-month real rate return (RRRM6), first-year real rate return (RRRY1), second-year real rate return (RRRY2) and third-year real rate return (RRRY3) are calculated from the date of issue of the IPO of the respective company.

Inferences

Table 5 below provides a succinct summary of the descriptive statistics, offering key insights into the wealth creation dynamics observed during this period. The analysis of real rate of return (RRR) data for both monthly and yearly time frames reveals a multifaceted picture of wealth creation dynamics among retail investors. On the surface, the means and medians suggest an overall trend of wealth creation with positive RRR values. Further exploration is essential to identify the specific factors influencing wealth creation and volatility within different time frames, ultimately providing valuable insights for retail investors seeking to optimize their investment strategies.

Table 5: Calculation of Monthly and Yearly Real Rate of Return of IPOs during 2012-2022

Descriptive Analysis	RRRM1	RRRM2	RRRM3	RRRM4	RRRM5	RRRM6	RRRY1	RRRY2	RRRY3
Mean	14.86	15.59	16.64	17.33	18.16	18.24	13.36	4.39	-20.12
Median	12.46	13.99	15.68	15.09	14.59	18.90	16.49	12.35	-4.10
Maximum	209.63	203.72	218.16	207.99	197.91	184.46	213.65	275.55	189.38
Minimum	-54.88	-83.56	-87.74	-103.86	-127.14	-135.86	-235.87	-250.31	-310.47
Std. Dev.	32.84	35.50	40.05	42.72	45.30	47.79	61.61	82.52	98.78
Skewness	1.58	1.06	0.95	0.59	0.38	0.26	-0.24	-0.17	-0.67
Kurtosis	8.84	6.32	5.58	4.62	4.11	3.55	4.06	3.37	3.34
Jarque-Bera	466.85	163.63	108.69	42.50	18.75	6.03	12.99	1.82	10.90
Probability	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.40	0.00
Sum	3775	3960	4227	4401	4557	4487	3059	741	-2776
Sum Sq. Dev.	272816	318781	405757	461717	512943	559622	865344	1143899	1336878
Observations	254	254	254	254	251	246	229	169	138

Source: Researchers' Calculation using MCA-21 & NSE data

Table 6 Analysis of Monthly and Yearly Real Rate of Return of IPOs

Returns	Total Sample	Real Rate of Return Positive (%)	Real Rate of Return Negative (%)
RRRM1	254	63	37
RRRM2	254	65	35
RRRM3	254	62	38
RRRM4	254	65	35
RRRM5	251	66	34
RRRM6	246	64	36
RRRY1	224	61	39
RRRY2	169	59	41
RRRY3	138	47	53

Source: Researchers' Calculation using MCA-21 & NSE data

Inferences

In Table 6, across all time frames, there is a consistent presence of both positive and negative RRRs, reflecting the diversity of returns experienced by retail investors. In the monthly time frames (RRRM1 to RRRM6), the percentage of positive RRRs ranges from 62% to 66%. This suggests that monthly, there is a higher likelihood of observing periods of wealth creation for the majority of IPOs analyzed. In the yearly time frames (RRRY1 to RRRY3), the percentage of positive RRRs ranges from 47% to 61%. While the percentage of positive RRRs is slightly lower in the yearly analysis compared to the monthly analysis, a substantial portion of IPOs still experience wealth creation over longer horizons. The percentage of negative RRRs (indicating wealth erosion) ranges from 34% to 53% across different time frames. This highlights the importance of risk management and diversified investment strategies for retail investors.

In summary, it underscores the variability in RRRs among IPOs, with some experiencing wealth creation while others face wealth erosion. It emphasizes the need for retail investors to carefully assess and manage risks, such as prudent portfolio diversification and risk mitigation strategies in their investment portfolios, particularly over longer time horizons.

7. CONCLUSION

The comprehensive analysis of Initial Public Offerings (IPOs) in the Indian Equity markets from April 2012 to December 2022 provides valuable insights into the wealth creation dynamics for retail investors. The research aimed to evaluate the short-term and long-term performance of IPO

stocks, appraise the wealth creation potential of IPOs for retail investors and propose a paradigm shift by considering the hurdle rate as aligned with the inflation rate.

The analysis of IPO performance revealed several key findings. While the listing day returns appeared promising, subsequent returns in the first week to the third month showed minimal variations, indicating limited growth during these periods. Long-term investors might find the returns less favorable compared to short-term traders, as the returns after three years showed a significant decline, even turning negative.

The distribution of returns across different time frames highlighted that most observations fell within the range of -10% to +10%, suggesting a concentration of IPOs with moderate returns. Extreme positive or negative returns were relatively rare, emphasizing the importance of prudent risk management strategies for retail investors.

The analysis of market-adjusted returns showed that a notable portion of IPOs exhibited positive returns on the listing day, progressively declining over longer periods. This trend underscored the challenges of sustaining initial performance in the long run.

The research paper proposes a paradigm shift by considering the inflation rate as the hurdle rate for retail investors. This perspective offers a fresh approach to wealth creation, ensuring that retail investors' financial aspirations remain resilient amid inflationary pressures.

Thus, while IPO investments can offer opportunities for wealth creation, retail investors must exercise caution, diversify their portfolios, and adopt risk management strategies to effectively navigate the dynamic landscape of the Indian equity markets. This study's findings provide valuable guidance for retail investors seeking to optimize their investment strategies and achieve their financial goals in a rapidly evolving financial environment.

8. IMPLICATIONS OF THE STUDY

The implications of the study are summarized as follows:

Informed Investment Decisions: Retail investors can benefit from the insights provided in this study to make more informed investment decisions. Understanding the historical performance of IPOs, both short-term and long-term, allows investors to set realistic expectations and tailor their investment strategies accordingly.

Long-Term Perspective: Retail investors with long-term investment horizons must carefully consider the trade-offs between short-term and long-term gains. The research highlights that while IPOs may show promise initially, sustaining returns over extended periods can be challenging.

Hurdle Rate and Inflation: The suggestion to consider the inflation rate as a hurdle rate for retail investors offers a novel perspective. This can help investors preserve their purchasing power and ensure that their investments yield real returns, even in inflationary environments.

Policy Considerations: Policymakers and regulators can use the insights from this study to refine policies related to IPOs and retail investor protection. This may include enhanced disclosure requirements or investor education initiatives.

Financial Industry: Financial institutions and advisors can use this research to guide retail clients in IPO investments better. They can tailor their advice and services to align with the study's findings, helping clients make more informed choices.

Academic Research: This study contributes to academic research on IPO performance and wealth creation mechanisms. It can serve as a foundation for further research exploring the drivers of IPO performance and its impact on retail investors.

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