

IPO Characteristics and Financial Outcomes: Empirical Evidence from Indian IPOs

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ABSTRACT

This study examines the effects of firm-specific factors on the short-run and long-run returns of Indian initial public offerings (IPOs). This research adopts the robust least-squares method to investigate the relationship between short- and long-term returns of IPOs and firm characteristics. This study examines hand-collected data for 328 IPOs over a period of 10 years to identify factors that influence the long-term and short-term performance of IPOs. The findings confirm that the issue price, age, and size have a significant and positive influence on the short-term performance of IPOs. Furthermore, the timing of IPOs has a negative impact on short-term performance. We also find evidence that short-term, market-adjusted excess returns have a positive effect on long-term returns. The findings of this study help to build an understanding of firm-specific factors that may be used to forecast IPO performance in the Indian context.

Keywords: IPO; Under-pricing; Performance; India

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INTRODUCTION

An initial public offering (IPO) is crucial for any business. Businesses can raise capital from new sources through IPOs, whereas existing shareholders can liquidate their holdings [1]. The distribution of resources in developing economies relies heavily on IPOs [2]. These are crucial phenomena to investigate because of the lack of developed institutional and legal frameworks, ineffective corporate governance procedures, disproportionate ownership, and significant levels of knowledge asymmetry [3].

Numerous studies have attempted to identify the variables that influence underpricing and IPO returns. Various theorists, including those of “information asymmetry” [4], the “winners’ curse hypothesis” [5], “underwriters’ reputation theory” [6], and “the signalling hypothesis” [7–9], have attempted to explain the reasons for initial positive returns [10].

The signalling hypothesis of underpricing has received much attention in the literature. The hypothesis states that initial public offerings (IPOs) are frequently underpriced to signal potential

investors about the IPOs’ perception, enabling the same company to offer their potential offerings to the public at a very high price [11].

Despite numerous explanations, several variables, including firm size, age, promoter shareholding, and timing of the offer, are thought to significantly impact IPO offer prices and profits [12–16].

Further, to assess the significance of firm-specific factors, it is often highlighted that one must consider both the immediate and long-term returns generated by these firms. Furthermore, it has been found that other factors, such as the issuer’s uncertainty, business environment, business sector or segment, and the auditors’ goodwill, can influence the offer price [17].

In the same context, this study aims to determine how different variables influence both short- and long-term returns in recent Indian IPOs. It attempts to identify key variables, as pointed out by various researchers, to gauge the success of IPOs, including firm size, age, issue size, promoter holdings, and promoter dilution [16].

This issue has mostly been explored in developed economies; however, empirical evidence in the

Indian context is limited. This study provides new insights into the recent surge in the demand for IPOs, especially for small investors. Furthermore, previous studies have highlighted different dimensions of the underpricing puzzle [10]; however, most have used traditional methods to test this relationship in the Indian context. This study employed a robust regression method to address outliers in the data. In a robust regression model, data with high residuals are assigned lower weights, which reduces the model's susceptibility to outliers. Consequently, robust regression estimates are considered more effective than OLS [18]. Therefore, this study explores the relationship between firm-specific factors and IPO returns using a more robust methodology to determine the factors that impact short- and long-term returns for the Indian IPO market.

The remainder of this paper is structured as follows. Previous research is summarized in the next section, and the empirical model and methodology are described in Section 3. Section 4 discusses the findings of this study. The study's implications, limitations, and conclusions are presented in Section 5.

LITERATURE REVIEW

IPOs have attracted the attention of several prominent academics. These studies provide significant evidence that investors are increasingly concerned about the factors affecting IPO performance. Among the earliest studies [19], the share held by promoters was considered to influence the long-term performance of IPOs. Additionally, studies have proven that investors are interested in companies where the founders own the majority of the stock [20, 21].

Another study [22] linked institutional investors' participation to higher IPO performance. In contrast, few studies have established a conclusive link between IPO returns and insiders' shareholdings [23–26].

In terms of previous studies exploring the linkages between IPO characteristics and market returns, Ritter [27] finds that mature firms incorporated earlier have better long-term returns. A study [28] provided evidence that larger issues exhibit long-term underperformance and are

more severely underpriced. Sohail and Raheman [29] also examined pre- and post-IPO offerings on the Karachi Stock Exchange and revealed a significant direct relationship between investors' interest in pre-IPO demand and bid ratio. Islam and Ali [30] found that bid size and business size are important predictors of IPO performance in Bangladesh.

Engelen and Essen [12] discovered an inverse relationship between listing-day gains and firm age. Bansal and Khanna [31] studied the factors that explain the degree of underpricing in the Indian context and found that a company's ownership structure, age, and market capitalization are important factors. Neneh and Smit [14] found that the timing and grading of an offer are important factors contributing to IPO underpricing [32]. Butler et al. [15] provided evidence of various firm- and market-specific factors, such as issue size, age, and market return, all of which impact IPO underpricing. Lizinska and Czapiewski [33] studied the relationship between firm size and discounts offered during an IPO. In contrast, Bubna and Prabhala [34] could not establish linkages between IPO underpricing and anchor investor participation.

Similarly, Handa and Singh [10] report positive and significant correlations between board size and board committees and short-run returns. Ownership patterns are also considered important variables by them that contribute to IPO returns. Sahoo [35] establishes a relationship between underpricing and the involvement of anchor investors in IPOs. The study by Y. Wang and G. Wang [36] tested the impact of the Chinese price restriction policy on the underpricing of IPOs and their long-term results and concluded that the policy enhanced the long-term performance of high P/E ratio stocks. According to Sochi and Islam [37], the level of underpricing is positively associated with bid size. Moreover, the additional results of the study show that underpricing is not significantly dependent on the age of the firm and bid timing.

Kumar and Sahoo [38] report a considerable relationship between IPO size, IPO grade, promoter ownership, timing, and the long-run performance of IPOs in India. According to Mangala and Dhanda [39], short-term IPO returns are related to industry

type and IPO periods. Support for the winner' scurse hypothesis on Indian IPOs was also reported by Chhabra and Kiran [16], who found that the short-run performance of Indian firms depends on the size of the firm, its age, and the issue size. Likewise Mangala and Dhanda [39] discovered that pre-issue and listing-year earnings management depends on firm performance, age, and issue size. In another study, Ranganathan and Saraogi [40] concluded that disclosure of how the IPO proceeds were used by the company resulted in an increasing level of voluntary underpricing in the premarket stage.

Another study by Agarwal and Vyas [7] considered a sample of 135 Indian IPOs and discovered that they had a significant effect on the long-run performance of IPOs because of board size, promotion of a promoter CEO, and retained strategic investor ownership. Ranganathan and Saraogi [40] found that there is a significant connection between the reputation of an underwriter and voluntary underpricing. In addition, they found that size and institutional oversubscriptions are important causes of IPO underpricing. Mulchandani et al. [41] provided empirical data on deliberate underpricing and mispricing of the first return in the aftermarket. However, the opposite is not true because Priyesh and Jijo [42] found no relationship between pre-IPO earnings management and institutional investor bidding. Arora and Singh [43] examined the relationships between female directors on boards and the underpricing of SME IPOs in India; the correlation did not show any statistical significance. A recent report by Agarwal and Vyas [7] indicated that pre-IPO fundamentals of issuers have a significant influence on listing-day returns as well as IPO returns after listing in the Indian market.

Overall, the literature identifies different aspects of the underpricing puzzle, including the fundamentals of the company, ownership structure, timing of the IPO, quality of the underwriter, quality of investment banker, use of funds, and goodwill of the auditors. In the Indian case, new investors have shown increased interest in investing in IPOs, particularly because of the recent success of new IPOs. Moreover, a recent literature review conducted by Chatterjee et al. [23] clearly shows that there is a need to investigate IPO

performance once listed on the exchange. To cover this vacuum, the performance (both short-term and long-term) of IPOs was assessed by considering IPOs that occurred between 2007 and 2016, and the relationship between them and various factors was tested, including the size of the firm, IPO price, timing of the IPO launch, diluted share of the promoter, and age of the company in the Indian market.

METHODOLOGY AND DATA COLLECTION

Empirical Model

Previous studies have employed standard ordinary least-squares (OLS) regression to analyze the impact of several variables on IPO underpricing. Nevertheless, IPO data have many outliers because some companies are more popular among investors than others, and that is why more reputable companies are underpriced. In addition, OLS regression cannot be used when there are extreme values because a slight percentage of extreme values can drastically change the OLS coefficients. Consequently, the OLS regression can provide incorrect output because of the presence of outliers. For example, Knez and Ready [44] specified that their results completely changed as soon as 1% of the worst data were eliminated. This indicates that OLS coefficients are sensitive to the existence of several extreme values. Most previous studies have focused on finding and eliminating outliers to obtain correct model estimators. Nonetheless, some information is also present in outliers; thus, by removing them, the results can be wrongly reported. Moreover, it is not easy to provide a precise definition of what an outlier is in a dataset. For example, some studies discarded extreme results (1%), but others discarded observations (5%).

Outliers were addressed using robust regression. A robust regression model has the benefit that high residual values have lower weights, thereby affording the model less sensitivity to outliers. Therefore, the output of a robust least squares regression yields a superior output compared to that of the OLS methodology [18].

The empirical model used in this study is defined by Equations 1 and 2 which aims at testing IPO performance in the short and long run, respectively.

List of Independent Variables

| S. No. | Variable | Definition | Supportive Literature | Hypothesized Relationship |
|--------|--------------------------------|--|--|---------------------------|
| 1 | Firm Size (Total Assets) | Natural logarithm of total assets of the firm | Mumtaz et al. (2016) [46]; Bansal & Khanna (2012) [31]; Lizinska & Czapiewski (2014) [33] | + |
| 2 | Age of the Company (AGE) | Number of years between the firm's incorporation and the IPO year | Jay R. Ritter (1991) [27]; Erik Engelen & Marc van Essen (2010) [12]; Sehgal & Singh (2008) [47]; Bansal & Khanna (2012) [13]; Butler et al. (2014) [15] | + |
| 3 | Issue Size (Size) | Total capital raised through the IPO | Roni Michaely & Wayne H. Shaw (1994) [28]; Sabhaya (2019) [48]; Islam & Ali (2010) [30]; Bansal & Khanna (2012) [13]; Butler et al. (2014) [15]; Kumar & Sahoo (2021) [38] | - |
| 4 | Promoter's Stake Dilution (PD) | Difference between promoter's shareholding before and after the IPO | H.E. Leland & David H. Pyle (1977) [19]; Chhabra, Kiran & Sah (2017) [49]; Bansal & Khanna (2012) [13] | - |
| 5 | Timing of the Offer (Timing) | Dummy variable indicating IPOs issued before and after the financial crisis period | Mahmood et al. (2011) [50] | + |
| 6 | Issue Price (IP) | Offer price at which shares are issued to investors | Sohail & Raheman (2009) [29]; Islam & Ali (2010) [30]; Kumar & Sahoo (2021) [38] | - |

Source: Compiled by the authors.

We ran simulations of two models by introducing independent variables step by step. Finally, joint testing of all variables was conducted to test model stability.

$$MAER_{i,t} = \alpha + \beta_1 Age_{i,t} + \beta_2 Size_{i,t} + \beta_3 PD_{i,t} + \beta_4 Ti \min g_{i,t} + \beta_5 IP_{i,t} + \beta_6 TotalAssets_{i,t} + \epsilon_{i,t}, \quad (1)$$

$$BHAR_{i,t} = \alpha + \beta_1 MAER_{i,t} + \beta_2 Size_{i,t} + \beta_3 PD_{i,t} + \beta_4 Ti \min g_{i,t} + \beta_5 IP_{i,t} + \beta_6 TotalAssets_{i,t} + \beta_7 Age_{i,t} + \epsilon_{i,t}. \quad (2)$$

DATA

This study considers various variables (company size, issuing company age, issue size, post-promoter holdings, and the time of the offers) that can be useful in informing investors to make a decision based on the IPO before investing. In this research paper, IPOs with a combination of book-building and the fixed-pricing process were listed on both the BSE and NSE between 2007 and 2016. Owing to the failure of some studies and the unavailability of certain data, this narrowed down to a final sample size of 327 IPOs. Information

Table 2

Description of Sample IPOs

| YEAR | No of IPOs | Issue Succeeded | Amount Raised (In Cr) | Average Amount Raised | Inflation Adjusted Average* |
|------|------------|-----------------|-----------------------|-----------------------|-----------------------------|
| 2007 | 108 | 104 | 33946.22 | 326.406 | 326.406 |
| 2008 | 39 | 36 | 18339.92 | 509.4422 | 468.761 |
| 2009 | 22 | 21 | 19306.58 | 919.361 | 826.484 |
| 2010 | 66 | 64 | 36362.18 | 568.1591 | 466.188 |
| 2011 | 40 | 37 | 5977.47 | 161.5532 | 121.090 |
| 2012 | 13 | 11 | 6834.17 | 621.2882 | 432.996 |
| 2013 | 5 | 3 | 1283.95 | 427.9833 | 280.542 |
| 2014 | 7 | 5 | 1200.94 | 240.188 | 151.683 |
| 2015 | 21 | 21 | 13513.17 | 643.4843 | 417.674 |
| 2016 | 27 | 26 | 26500.82 | 1019.262 | 649.002 |

Source: Compiled by the authors.

Note: * Inflation Adjusted Average was calculated taking WPI of 2007 as a base year.

Table 3

Descriptive Statistics

| Indicator | IP | Size | PD | Total Assets | MAER | AGE | BHAR |
|-----------|---------|----------|-------|--------------|-------|--------|-------|
| Mean | 215.75 | 497.76 | 22.85 | 22132.04 | 0.17 | 15.30 | 0.10 |
| Median | 142.50 | 127.68 | 22.14 | 29836.04 | 0.07 | 12.00 | 0.08 |
| Maximum | 1310.00 | 15199.44 | 58.74 | 33946.22 | 2.86 | 102.00 | 1.44 |
| Minimum | 10.00 | 6.00 | 10.25 | 758.42 | -1.11 | 1.00 | -2.43 |
| Std. Dev. | 213.35 | 1336.15 | 8.01 | 11433.45 | 0.45 | 14.25 | 0.36 |
| Skewness | 2.00 | 7.28 | 0.66 | -0.41 | 1.97 | 3.47 | -0.59 |
| Kurtosis | 7.47 | 67.11 | 3.63 | 1.66 | 10.41 | 17.96 | 11.07 |

Source: Compiled by the authors.

Note: IP = Issue Price; Size = Issue Size; PD = Promoter's Stake Dilution; Total Assets = Firm Size; MAER = Market Adjusted Excess Return; AGE = Age of the firm at the time of IPO; BHAR = Buy-and-Hold Abnormal Return.

Table 4

Factors Affecting Short Run IPO Performance

| Factors | MAER | MAER | MAER | MAER | MAER | MAER |
|--------------|----------|---------|---------|---------|---------|-----------|
| IP | 0.051*** | | | | | 0.069*** |
| | (0.01) | | | | | (0.02) |
| Size | | 0.037* | | | | 0.043** |
| | | (0.020) | | | | (0.020) |
| Age | | | 0.050** | | | 0.044* |
| | | | (0.025) | | | (0.026) |
| Total Assets | | | | 0.011 | | 0.023 |
| | | | | (0.011) | | (0.020) |
| PD | | | | | -0.041 | -0.069 |
| | | | | | (0.049) | (0.049) |
| Timing | | | | | | -0.0484** |
| | | | | | | (0.0238) |
| Cons | -0.174** | -0.273 | -0.034 | 0.013 | 0.217 | -0.476* |
| | (0.084) | (0.202) | (0.064) | (0.080) | (0.153) | (0.263) |
| N | 328 | 328 | 327 | 326 | 328 | 325 |

Source: Compiled by the authors.

Note: Standard errors in parentheses * p < 0.10, ** p < 0.05, *** p < 0.01.

on several parameters was obtained through different websites, such as bid price, listing price, and listing date, among other sites such as Chittorgarh.com and nseindia.com. Data on informative factors were obtained from the CMIE Prowess database.

The excess return adjusted for the market (MAER) or the so-called underpricing or first-day price is determined using the following formula:

$$MAER = \{(P_1 - P_0) / P_0 - (M_1 - M_0) / M_0\} * 100,$$

Table 5

Factors Affecting Short Run IPO Performance (With Year Dummy)

| Factors | MAER | MAER | MAER | MAER | MAER | MAER |
|------------|---------|----------|---------|---------|---------|----------|
| IP | 0.05*** | | | | | 0.069*** |
| | (0.01) | | | | | (0.021) |
| Size | | 0.0518** | | | | 0.0427* |
| | | (0.024) | | | | (0.025) |
| Age | | | 0.052** | | | 0.044* |
| | | | (0.02) | | | (0.026) |
| TA | | | | 0.0125 | | 0.0239 |
| | | | | (0.012) | | (0.020) |
| PD | | | | | -0.042 | -0.069 |
| | | | | | (0.050) | (0.050) |
| Timing | | | | | | -0.048** |
| | | | | | | (0.021) |
| Year Dummy | Y | Y | Y | Y | Y | Y |
| Cons | 7.932 | -15.37 | 5.660 | 3.933 | 2.237 | -0.119 |
| | (12.28) | (14.81) | (12.35) | (13.01) | (12.49) | (16.63) |
| N | 328 | 328 | 327 | 326 | 328 | 325 |

Source: Compiled by the authors.

Note: Standard errors in parentheses * p < 0.10, ** p < 0.05, *** p < 0.01. Year-fixed effects are included in all models to control for time-specific macroeconomic and market conditions affecting IPO performance.

where P_0 – Offer Price; P_1 – First day of trading price; M_0 – The market index of the day before the offer had an ending value; M_1 – Closing of market index on the day of offer closing. Long-term (3-year holding period) returns success is measured by buy-and-hold abnormal returns (BHAR).

$$BHAR = \prod_{t=1} (1 + R_{i,t}) - \prod_{t=1} (1 + R_{m,t}),$$

where $R_{i,t}$ – Firm’s return in t month; $R_{m,t}$ – t month market index return.

Table 6

Factors Affecting Long Run IPO Performance

| Factors | BHAR | BHAR | BHAR | BHAR | BHAR | BHAR | BHAR |
|---------------|----------|----------|---------|---------|---------|---------|----------|
| MAER | 0.858*** | | | | | | 0.861*** |
| | (0.005) | | | | | | (0.005) |
| IP | | 0.050*** | | | | | 0.002 |
| | | (0.016) | | | | | (0.002) |
| Size of Issue | | | 0.034* | | | | -0.002 |
| | | | (0.019) | | | | (0.002) |
| Age | | | | 0.043* | | | 0.000 |
| | | | | (0.023) | | | (0.003) |
| TA | | | | | 0.008 | | -0.000 |
| | | | | | (0.011) | | (0.002) |
| PD | | | | | | -0.051 | -0.001 |
| | | | | | | (0.046) | (0.006) |
| Timing | | | | | | | 0.003 |
| | | | | | | | (0.003) |
| Cons | -0.01*** | -0.171** | -0.246 | -0.020 | 0.031 | 0.245* | -0.016 |
| | (0.002) | (0.083) | (0.189) | (0.060) | (0.075) | (0.143) | (0.033) |
| N | 327 | 328 | 328 | 327 | 326 | 328 | 325 |

Source: Compiled by the authors.

Note: Standard errors in parentheses * p < 0.10, ** p < 0.05, *** p < 0.01.

The *BHAR* reflects the application of first-day excess returns to buyers and the disappearance of returns on the listing day [45]. *Table 1* presents the other variables and supporting literature.

EMPIRICAL RESULTS

Table 2 presents year-wise statistics for the number of IPOs listed on both NSE and BSE that tried to raise capital and the number of successful IPOs. It also presents data on the total amount raised and average amount in a particular year. For a better

Table 7

Factors Affecting Long Run IPO Performance (With Year Dummies)

| Factors | BHAR | BHAR | BHAR | BHAR | BHAR | BHAR | BHAR |
|-------------|----------|----------|---------|---------|---------|---------|----------|
| MAER | 0.855*** | | | | | | 0.859*** |
| | (0.004) | | | | | | (0.005) |
| IP | | 0.056*** | | | | | 0.002 |
| | | (0.017) | | | | | (0.002) |
| Size | | | 0.040* | | | | -0.002 |
| | | | (0.023) | | | | (0.003) |
| Age | | | | 0.046* | | | 0.000 |
| | | | | (0.024) | | | (0.003) |
| Total Asset | | | | | 0.011 | | -0.000 |
| | | | | | (0.01) | | (0.002) |
| PD | | | | | | -0.05 | -0.000 |
| | | | | | | (0.047) | (0.006) |
| Timing | | | | | | | 0.003 |
| | | | | | | | (0.003) |
| Year Dummy | Y | Y | Y | Y | Y | Y | Y |
| Cons | -3.106** | 13.81 | -6.815 | 9.547 | 9.327 | 7.818 | -0.582 |
| | (1.522) | (11.61) | (13.94) | (11.54) | (12.23) | (11.74) | (2.096) |
| N | 328 | 328 | 328 | 327 | 326 | 328 | 325 |

Source: Compiled by the authors.

Note: Standard errors in parentheses * p < 0.10, ** p < 0.05, *** p < 0.01.

comparison, the average amount over the years was deflated using the Wholesale Price Index (WPI) for the same year. These numbers indicate a significant decrease in the number of IPOs since 2007. After 2010, the average increase significantly declined.

Table 3 presents the descriptive statistics of the variables utilized in the research. The average MAER is 17%, which provides initial indications of IPO underpricing resulting in listing-day returns in India. In addition, the number value of the proxy for

long-run returns, as depicted by BHAR, is smaller than MAER, implying that positive returns are eroded by most IPOs over the long run. Moreover, the standard deviations in BHAR and MAER are high, which is related to high risk in Indian IPO investments. Furthermore, the other variables have high standard deviations, indicating that they vary extensively; thus, the robust least squares approach is more applicable than the ordinary least squares approach.

Promoter stake dilution and total assets do not exhibit a statistically significant relationship with MAER, indicating that these factors do not play a significant role in determining short-run IPO performance in the sample.

Next, we test the correlation between the short-term performance of an IPO and firm-specific variables. *Table 4* presents the results; we initially test each variable separately and then test all the variables simultaneously through Equation 1. The findings testify to the positive correlation between the issue price (IP), size of the issue (size), and age of the firm (age). The other variables did not have any significant relationships. Regarding the timing of the offer, which is a dummy variable of the crisis period, we observe an inverse correlation, indicating that short-run returns are negatively influenced by such events or periods. We add year dummies to our model to test the strength of our findings. The findings in *Table 5* are similar to those in *Table 4*, indicating that our findings are robust against heterogeneity across time.

Table 6 presents the findings of Equation 2, which was used to test the association between long-run performance and firm-specific characteristics. The findings imply that IP, size, and age have marginally positive effects on long-run performance when run separately; however, the opposite holds when all the variables are jointly run. With the exception of BHAR, the other variables do not have a significant influence on IPO performance in the long term.

CONCLUSION AND IMPLICATIONS

This study analyzes the connection between various variables that influence the short-term and long-term returns on new issues in India. Long-term returns were measured using the BHAR, and market-adjusted excess returns (MAER) were taken as a proxy for underpricing or first-day returns, which were the dependent variables in our models. It examined IPOs that occurred between 2007 and 2016, such as the size of a firm, the price of the issue, the time of the offering, the diluted stake of the promoter, and the age of the company, which were the independent variables.

Regarding short-term profitability, the findings support a positive correlation between the issue price (IP), size of the issue (size), and the age of the firm (age). In terms of the time of the offer, which was a dummy variable for the crisis period, the study discovered that there was an inverse correlation, that is, the short-term returns are adversely affected by such events or periods.

Considering factors related to long-term profitability, the findings show that IP, size, and age marginally affect long-run performance; however, the same does not hold when the variables are tested in combination as a model. None of the other variables has a significant effect on IPO long-run performance, except for MAER.

Overall, the results indicate that the issue price, size, and age of the issuing company play an important role in IPO underpricing. However, promoter stake dilution and total assets do not show statistically significant effects on short-run IPO performance. The positive relationship with the issue price suggests that IPOs with higher offer prices tend to experience higher market-adjusted excess returns on the listing day [51, 52]. Furthermore, the positive coefficient of issue size indicates that larger IPOs, measured by the amount of capital raised, are also associated with higher initial abnormal returns. Furthermore, the coefficient of firm age is also positive and statistically significant, implying that older firms tend to generate higher MAER, possibly because a longer operating history reduces information asymmetry and enhances investor confidence.

In contrast, promoter stake dilution and total assets do not exhibit a statistically significant relationship with MAER, indicating that these factors do not play a significant role in determining short-run IPO performance in the sample. Finally, the negative coefficient of the timing variable suggests that IPOs issued during the post-financial crisis period tend to generate lower abnormal returns than those issued before the crisis. Such findings are consistent with [16] and [39], who find that issue price, age, and issue size have a positive effect on the short-run performance of Indian IPOs.

Moreover, we find evidence that short-run IPO performance (MAER) has a strong and positive effect on long-run performance (BHAR), suggesting that firms experiencing higher initial abnormal returns tend to maintain superior performance over the three-year holding period. In the individual regressions, issue price, issue size, and firm age show weak positive effects on BHAR, although these effects lose statistical significance when all variables are included in the full model. This indicates that MAER remains the primary determinant of long-run IPO performance, whereas other firm characteristics do not significantly influence long-run abnormal returns in the presence of MAER. These findings contradict past literature, which provides evidence of strong linkages between promoter dilution and the size of firms' assets in the long term [15, 19, 38, 53].

The results have several important implications for investors and policymakers. First, the positive and significant relationship between issue size and short-term returns suggests that larger IPOs tend to perform better over time. This may be linked to higher investor demand due to greater market visibility for larger offerings from both individual and institutional investors. Second, the positive association between firm age and performance indicates that older firms experience higher initial market-adjusted returns, which is due to higher investor confidence and lower information asymmetry for older firms. These findings suggest that firm characteristics, such as issue size, firm age, and issue price, can help investors evaluate IPO investments in the Indian context. For policymakers and regulators, the results highlight the need to improve disclosure standards to reduce information asymmetry and support efficient price discovery in the primary equity market.

This study has limitations that can be addressed in future research. Since the findings suggest the significance of firm-specific variables that determine the short- and long-term returns of IPOs, future studies can investigate the moderating effects of these internal and external factors. Finally, qualitative aspects, such as investor sentiment, government policy uncertainty, and trade policy uncertainty, which influence IPO returns, can also be taken into account.

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