



Financial and Operating Performance of Initial Public Offerings in Pakistan

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ABSTRACT

This study examines the relationship between prior IPO demands and post-IPO financial and operating performance of firms listed in the Pakistan Stock Exchange. A sample of 51 listed firms, covering a period of ten years, is examined. Predominantly, the investor's demand has been analyzed from two perspectives, including oversubscription (a high demand from investors as compared to shares offered by firms) and under subscription (a low demand from investors as compared to shares offered by the firm). Multiple regression analysis has been applied, where the findings revealed that investors demand IPO bring no significant change in the financial and operating performance of IPO firms. Moreover, the analysis reveals that firm size, issue size, and leverage bring no notable change in IPO firms' operating performance. The findings are important for the investors, portfolio managers, and underwriters.



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1. Introduction

The investors take part in the secondary market trading and buy new shares from the primary market at the firms' IPO. IPO is an invitation to the general public to buy its share in the primary market and sell them immediately after IPO in the secondary market. Initial Public Offerings' event brings tremendous interest for the general public besides the stock exchange investors because most of the IPOs are oversubscribed, leading to underpricing where investors can earn high initial returns by selling their shares. Companies obtain subscription rate offered capital divided by demand for firm capital from the public. Krishnamurti & Kumar (2002) analyzed the progress of IPOs in the Indian markets, and they came up with results

that both are underpricing and subscription rates are correlated. On the other side, Sahoo & Rajib (2010) reported that the subscription rate does not affect the firms' long-run performance.

An empirical investigation on Pakistan Stock Exchange is generally rare. Sohail and Nasr (2007) analyzed the performance of IPOs in Pakistan and took into account the IPOs of fifty companies from the year 2001 to 2005 listed on the Pakistan Stock Exchange (PSX). They ended up with results showing a high level of underpricing in IPOs, which is nearly 35.66% on average for investors. While analyzing the IPO's long-run performance, they used the BHAR model and concluded that IPO gives negative returns to investors in the long run. The present study focuses on the impact of investors' demand over and under subscription on initial public offerings (IPOs) concerning PSX.

This research aims to highlight those factors that help the issuing company understand what firms' features, especially regarding IPO, can affect its operating performance. Are these elements of IPO can be a good estimator of firm performance? The study is conducted on a stock market, which is one of the best performing capital markets but at the same time operating in a country where overall economic signs are not very healthy, so this situation makes this study important to know for a company to understand those factors which can affect their long-run performance especially if they want to expand their operations and want to go for external funding through equity. This study is essential for companies operating in PSX to determine those factors that can help them predict their operating performance in the long run and the importance of the funds raised through IPOs by a firm. This also helps in determining the optimal level of capital structure.

This study's main objective is to find out to what extent investors' demand affects the financial and operating performance of IPOs. The study will also analyze the relationships between investor's demand, firm size, and leverage with companies' financial and operating performance newly listed at PSX.

2. Literature Review

Although an initial public offering provides investors an opportunity to receive extraordinary initial returns on the other side, an Initial public offering is a way to generate funds for issuing firms, fulfilling the company's financing needs both in the short and long term. Sohail & Nasr (2007) examined the IPOs and found uncertainty, issuance size, market capitalization, and over subscription are the factors that help determine the level of initial excess returns. Simultaneously, price-earnings ratio, seasoned equity, and stock price volatility are less influential regarding the level of underpricing. Further elucidation of underpricing is related to oversubscription.

Bansal and Khanna (2012) studied IPOs and established that it is an important part of a firm's building up and affects the firm's performance. Although underpricing is prevailed all over worldwide, but it is taken as an irregularity. The study has confirmed the effect on IPO underpricing performance due to the Indian stock market crisis. The variables like the firm's age, issue size, subscription rate, market capitalization, the total number of shares offered to the general public, and pricing mechanism have been studied in detail. This research investigates the association between the dependent variables, including underpricing, offer size, age of firm, market capitalization, rate of subscription, and a total number of shares offered to the public and mechanism about the price. Their findings reveal that the number of shares offered to investors, market capitalization, and issue size is noteworthy factors

affecting the level of underpricing. Other factors, including Issue size & number of shares offered, are observed as negatively affecting underpricing. Market capitalization is seen with underpricing in a positive relationship. The remaining factors of the firm's age, pricing mechanism, and subscription rate have the least effect on underpricing.

Bansal and Khanna (2012) analyzed underpricing phenomena in the Indian stock exchange and explored the dominating elements for underpricing. The essential elements are the size of the issue, market capitalization, and offered shares, which significantly affects the underpricing of IPO. According to their study, the relationship between issue sizes & the number of offered will be negative. Secondly, they have found a positive relationship between market capitalization and underpricing level. However, an insignificant relationship has been observed between subscription, age of the firm, and pricing mechanism with underpricing. Overall, the crises have generally affected the Indian stock market, and precisely it hits underpricing level and other related elements.

The study by Wong (2012) is based on the earnings performance of 418 IPOs registered on the stock exchange of Hong Kong. The analysis reveals that these IPOs for the third year before listing up till the fifth year of post-listing, these IPOs performances reach climax in the year of listing or the year before listing. Also, the decline is observed in post-issue profitability immediately the year after listing occurs. Almost 30% of these IPOs undergo a failure after three years of the offerings. This issue is more critically observed in smaller firms, highly geared companies, fast-growing enterprises, companies with lower ownership retention by original shareholders, and companies that have directed earnings upwards at the time of listing. These studies are regular with the higher agency costs with public firms. Moreover, the evaluation verifies that IPOs utilize income-increasing accruals to manage their earnings increasing in the public year. In post-issue years, the setback of the accruals may lead to a decline in their profitability.

Another study by Agarwal et al. (2008), regarding Hong Kong stocks IPOs, reported that an IPO with high demand from the customer side would lead towards a speculative bubble because of the investor's over-optimism about the firm's prospect. In another study, Alanazi and Liu (2013) also analyzed the operating and financial performance of the companies operating in the GCC region comprised of 52 IPOs from the period of 8 years from 2003 to 2010. Their findings reveal that firms' post IPO performance declines—the reason being increasing agency cost while the transition of firms from a private company to a public one. The study also reports the opportunity theory is lacking as a firm has more room for improvement in sales and capital expenditure before going public than after IPO. They further report for overvaluation in accounting records or window dressing, which attracts the potential investors for the short-run but further deflated the performance when adjusted to real figures after IPO.

Chi, McWha, and Young (2010) have taken into study the newly listed IPOs of New Zealand from 1991 to 2005, covering 15 years, and analyzed which factors affect their survivorship and ensures their performance in the long run. They came up with the same results as previous studies that IPO are underpriced and show low performance, especially in the short run. They also reported that in recent years New Zealand IPO underpricing trend has been deteriorating. They also found that event of IPO does not create a much impact on the firms operating performance. Their findings suggest that firm size, underpricing, and pre-listing operating performance are the main elements that affect newly listed firm performance, whereas the company with high risks or less age is usually underperformed in the market. Their findings also reveal that those newly listed firms that do not survive in the long run will merge or take over by the other large firms. An essential point in their study is that firms taking over by others show far better performance than firms that survive at their resources.

Moreover, highly unpredictable firms, consistent policies, and issuing their shares to the public in hot market conditions are more likely to fail.

Khadim and Babar (2017) checked IPO intra-industry effects for the Pakistan Stock Exchange (PSX), where they found that the effects of IPO Intra industry are insignificant in the short run, whereas the effects are significant but harmful in the long run. They also found that IPO abnormal returns and IPO proceeds have a significant negative relationship with the rival's stocks in the long run. A successful IPO has a negative signal for the existing firms, where the existing firms' operating performance deteriorates due to the success of a new IPO in the industry.

Mumtaz, Smith, and Ahmed (2016) also estimated the aftermarket performance of IPO in Pakistan Stock Exchange (Formerly Karachi Stock Exchange) and found that the studied IPOs had statistically significant abnormal returns in the short run, which shows general underpricing of the IPOs. In contrast, IPOs underperformed in the long run, which means that the market reprices the newly issued shares after some time. They concluded that the overreaction hypothesis, ex-ante uncertainty hypothesis, and window-of-opportunity hypothesis were very relevant to gauge the aftermarket performance of IPOs.

Based on the critical literature review, the following hypotheses were developed:

H1: Subscription rate will affect the firm's financial and operating performance.

H2: Firm's financial and operating performance is positively related to the size of the firm.

H3: Firm's financial and operating performance is positively associated with financial leverage.

H4: Firm's financial and operating performance is positively associated with issue size.

3. Theoretical Framework

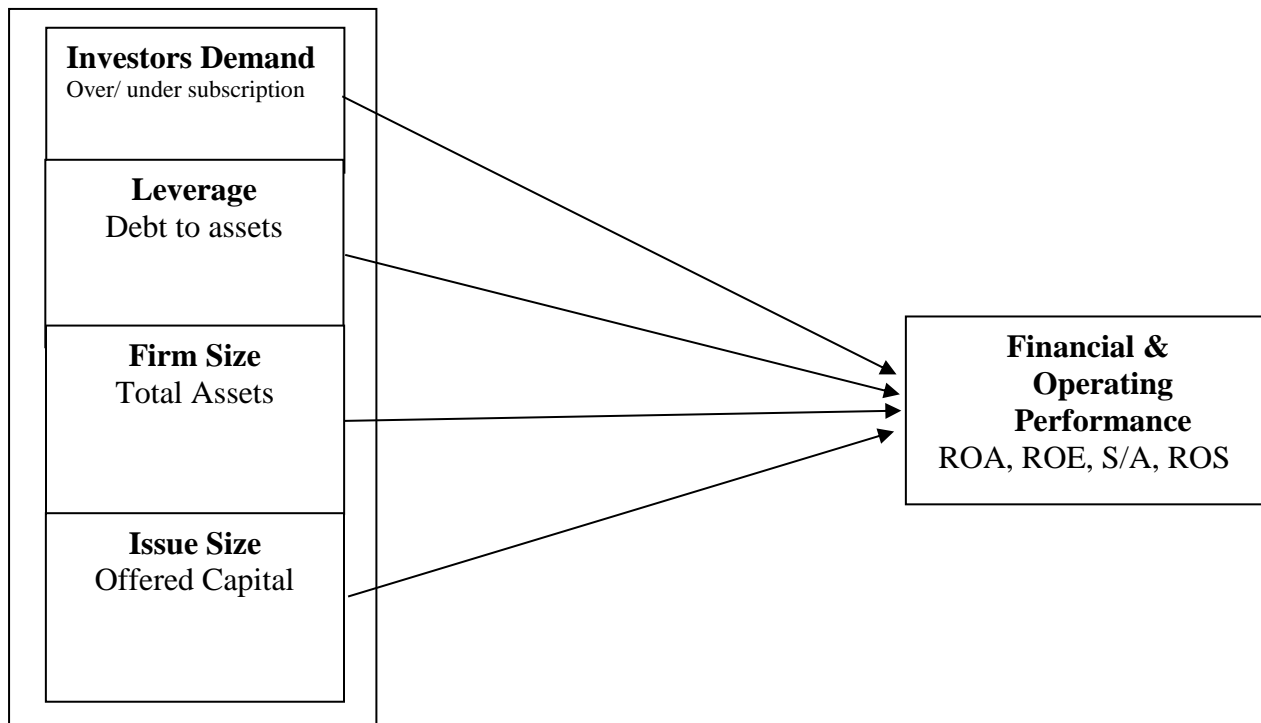


Figure 1: Theoretical Framework

Table 1
Operational Definitions

	Symbol	Description	Variable
Return on assets	ROA	Net income before tax divided by the total value of assets.	Dependent
Return on equity	ROE	Net income before tax divided by shareholders' equity	Dependent
Sales to assets	S/A	Total sales divided by total assets	Dependent
Return on Asset	ROA	Before tax net income divided by total sales	Dependent
Subscription rate	SUB	Investors demand for shares on newly listed company.	Independent
Total Assets	SIZE	Natural logarithm of the total assets of a firm in the year of listing	Independent
Leverage	LEV	Ratio of total debt to total assets	Independent
Issue Size	IS	Total amount of offered capital at IPO	Independent

4. Data and Methodology

For research, we have selected newly listed companies of Pakistan at Pakistan Stock Exchange, covering a time span of 10 years. During the period, 69 firms have been registered. The final sample used in the study consists of 51 companies, 70% of the whole data. The main reason for excluding firms is their data's unavailability, plus some firms have been delisted or wind up their businesses. The study is based on secondary data collected to measure the dependent and independent variables of the study. It is compiled through State Bank of Pakistan reports' financial statement analysis, Balance sheet analysis of non-financial firm of PSX, business recorder, and through PSX website. To generalize, the study firm of each sector has been included irrespective of their size and age. The results of the diagnostic tests are satisfactory. The regression analysis is then used to identify the impact of independent variables on the dependent variables (operating and financial performance). The regression model is as follows:

$$\text{Operating Performance / Financial Performance} = \beta_0 - \beta_1 (\text{Subscription rate}) + \beta_2 (\text{leverage}) + \beta_3 (\text{firm size}) + \beta_4 (\text{issue size}) + \varepsilon \quad (1)$$

5. Results and Discussion

In the following Table 2, we have tested the hypothesis regarding the impact of leverage, issue size, firm size, and subscription rate on the return on assets of the IPO firm. The probability value of independent variables leverage, firm size, and subscription rate is greater than 0.05, showing no significant relationship between independent and dependent variables. However, the probability value of issue size is less than 0.05, which shows a significant relationship between issue size and return on assets. Similarly, R square is 13 %, which is also insignificant and unable to explain variation independent variable.

In the following Table 3, we have checked the impact of leverage, issue size, firm size, and subscription rate on the IPO firm's return on equity. The probability value of all independent variables leverage, issue size, firm size, and subscription rate is greater than 0.05, showing no significant relationship between independent and dependent variables. Similarly, R square is 5 %, which is also insignificant and unable to explain variation independent variable.

Table 2
Model 1 – ROA as Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-3.415986	7.958464	-0.429227	0.6698
LEV	-0.052866	0.106177	-0.497907	0.6210
IS	0.017892	0.004863	3.678983	0.0006
SIZE	4.38E-06	8.29E-06	0.527788	0.6002
SUB	0.007141	0.004636	1.540161	0.1305
R-squared				0.131726
Adjusted R-squared				0.054546

Table 3
Model 2 – ROE as Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	374.2501	379.7591	0.985494	0.3295
LEV	-12.69206	13.01443	-0.975230	0.3345
IS	-0.388131	0.427878	-0.907107	0.3691
SIZE	0.001506	0.001580	0.953049	0.3455
SUB	0.434912	0.457347	0.950946	0.3466
R-squared				0.051613
Adjusted R-squared				0.030856

In Table 4, we checked the impact of leverage, issue size, firm size, and subscription rate on return on the IPO firm's sales. The probability value of all independent variables leverage, issue size, firm size, and subscription rate is greater than 0.05, showing no significant relationship between independent and dependent variables. Similarly, R square is 10 %, which is also insignificant and unable to explain variation independent variable.

Table 4
Model 3 – ROS as Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-29.39117	22.00894	-1.335420	0.1883
LEV	0.411402	0.378458	1.087048	0.2827
IS	0.022247	0.011560	1.924561	0.0605
SIZE	3.92E-05	3.27E-05	1.198479	0.2369
SUB	-0.015451	0.017973	-0.859655	0.3944
R-squared				0.096714
Adjusted R-squared				0.018168

In Table 5 below, we checked the impact of leverage, issue size, firm size, and subscription rate on sales on assets of the IPO firm. The probability value of independent variables leverage, issue size, and subscription rate is greater than 0.05, showing a significant relationship between independent and dependent variables. However, the probability value of firm size is 0.01 less than 0.05, which shows a relationship between firm size and return on assets. Similarly, R square is 14 %, which is also insignificant and unable to explain variation independent variable.

Table 5
Model 4 – SA as Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	54.78422	20.07886	2.728453	0.0090
LEV	-0.176823	0.331204	-0.533880	0.5960
IS	0.003794	0.017267	0.219728	0.8271
SIZE	-0.000107	4.02E-05	-2.663592	0.0106
SUB	0.072661	0.080645	0.900996	0.3723
R-squared				0.144727
Adjusted R-squared				0.070355

6. Conclusion and Recommendations

This study examines the relationship between prior IPO investors' demands and post-IPO financial and operating performance of firms listed at PSX. The findings reveal that investors' demand for IPO doesn't significantly affect firm financial and operating performance. The other firm performance elements have also been applied to predict IPO performances like firm size, issue size and leverage but even these elements do not appear to have a significant impact on IPO firm financial and operating performance. The findings corroborate the results of many studies. Likewise, Kurtaran and Er (2008) found no significant relationship between post IPO operating performance and underpricing level. In another study, Bansal & Khanna (2012) found an insignificant relationship between the level of subscription, age of the firm, and pricing mechanism underpricing the Indian market. Sahoo & Rajib (2010) also concluded that the subscription rate has an insignificant impact on the long-term performance of IPOs.

This research is necessary while considering Pakistan's economy and PSX's overall situation, which are the two extremes. On one side, the performance of PSX has been found remarkable, but on the contrary, Pakistan's overall economic situation is not satisfactory. Here, the question arises what sort of strategies a firm is supposed to adopt while planning for an IPO? It has been noted by many researchers that companies go for IPOs at the time when their performance starts declining. Keeping in view all these circumstances, it is essential to analyze such factors essential for IPO firm survival and growth in the long run. The government needs to identify critical elements that can affect the IPO firm's financial and operating performance. IPO firms need to know how they ensure their long run operating performance or at least maintain their previous performance after going public, as a considerable decline in IPO firms' financial and operating performance has been normally observed.

Conflict of Interests/Disclosures

The authors declared no potential conflicts of interest w.r.t the research, authorship and/or publication of this article.

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