

# WHY DO FIRMS DECIDE TO GO PUBLIC? A CASE STUDY OF KARACHI STOCK EXCHANGE

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## Abstract

*This study empirically examines the motivations of going public decision. This study used pre-IPO characteristics and ex-post consequences of IPO firms to address the exceeding research objective. It used a sample of 70 newly listed firms during 2000 to 2014 on Karachi Stock Exchange (KSE). In this study, a panel probit regression model is used to estimate the impact of fundamental factors on going public decision. The results of this analysis reveal that larger-size firms, carrying high sales growth, more profitable, industry MTB ratio and firms related general trade industry come into sight are significant determinants. Furthermore, we investigate ex-post consequences of IPO firms by comparing with the same pre-IPO characteristics by using 'Wilcoxon two-sample signed rank' test. The results of this investigation reveals that: Going public decision is used (i) to dilute ownership, risk diversification and reduction in external monitoring (ii) to finance their future investments and expansions, and (iii) to rebalance their capital structure.*

**Keywords:** Initial Public Offerings, Going Public Decision, Karachi Stock Exchange, IPO Firms.

**JEL Classification:** G200

## Introduction

During the last two decades, hundreds of Pakistani firms went public through selling their shares to the general public. Yet numerous other Pakistani firms have intentionally preferred to remain private although they are eligible to comply the prerequisites of going public. The above argument triggers the question to what motivations appeal the firms' to decide to go public.

Usually, unlisted firms decide to offer common stock to general public primarily to raise equity capital to finance their capital expenditures and investments, although researchers have proposed numerous theories to explain the motivations for going public.

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Albornoz and Pope (2004) argued that due to unavailability of private limited firms' data and relevant theories required for empirical analysis of the choice between firms stay private or decided to go public. Pagano et al. (1998) is the first study that empirically tested the theories related motivations to go public by using a sample of 69 Italian IPO firms listed during 1982 to 1992. They found that firms decided to go public mainly to decrease in cost of credit and to rebalance their capital structure. The existing literature on behavioral finance largely indicates investor irrationality and market inconsistencies. Corporate behavioral finance is the latest research direction to get hold of two divergent means. First, draw attention to the impact of market inefficiency on corporate policies – how elegant corporate managers choose a corporate policy to exploit investors' irrationality and market mispricing. Second, manager's rationality swapped with evidence-driven psychological fundamentals. The findings highlight that how managerial biases create impact on managerial practices and beneficial to shareholders wealth.

This study follows the exploiting investors' irrationality and market mispricing of behavioral finance approach in investigating the motivations for going public decision. This study explores whether behavioral inclinations of investors and analysts influence on managers' decision regarding raising capital by undertaking initial public offerings. This study empirically estimates the determinants of Pakistani firm's decision for going public. The above investigation highlights two research issues: (1) what pre-IPO characteristics of newly listed firms associated with their decision to go public than firms stay private? (2) What post-IPO consequences of the IPO firms impact on their going public decision? The answers on the aforementioned research issues consistent with to uncover motivations to go public on the basis of pre-IPO and post-IPO characteristics of newly listed firms. Practically, post-IPO characteristics probably move together based on pre-IPO characteristics of firms they went public, for two grounds. First, the significance of several factors such as ownership dilution by sponsors cannot be assessed in the pre-IPO period situation. Second, sometimes, the purpose of going public may not fully anticipated.

### **Literature Review**

The existing literature on decision for going public has adopted two dimensions to estimate the determinants of raise equity capital decision.

#### *Survey-Based Studies*

Meluzin and Zinecker (2014) have examined the determinants that influence the decision of going public. The survey findings revealed that raising equity capital is a major cause to conduct IPOs by the strong support of both groups. More than 50% respondents from each group considered as going public decision have a positive impact on market visibility and increase bargaining power with financial institutions to raise external capital. They have less support for IPO as an exit strategy and tool of rebalancing capital structure. Szyszka (2014) conducted a qualitative study with 166 managers

of recently listed IPOs on the Warsaw Stock Exchange (WSE). Their findings reveal that IPO firms went public only in hot-issue market phase, when ex-ante market sentiments are bullish and investors are optimistic about future performance. More than 25% respondents wish to disclose their historical financial performance in the prospectus before deciding to go public to maximize their IPO proceeds. Brau and Fawcett (2006) forward questionnaire to 336 CFOs of United Nations companies. Their survey response rate was 18.10% out of 336 CFOs sample. Their results reveal that acquisition was a key aspect to motivate the management to decide to go public; issuers decide to go public to take the advantage of market sentiments when stocks were assessed overvalued and to safeguard the decision-making power and ownership were the major factors to remain unlisted. Burton et al., (2006) forward a questionnaire to management executives and underwriters to investigate the reasons for going public in the United Kingdom. Out of 450 companies, only 102 (23%) firms act in response. Third, information regarding market capitalization and net IPO proceeds were obtained from secondary sources. The results of the survey revealed that to increase market visibility and to build image were the major reasons for going public decision; to finance future growth was also an important reason for conducting IPO.

#### *Fundamental Data & Macro-economic variables Based Studies*

Mayur and Kumar (2013) examine the motivations for going public decision in the Indian market. They studied ex-ante firm characteristics and ex-post consequences of going public firms by using the panel logit regression model. This analysis depicts that younger, riskier, high profitability, high sales growth and large sized firms were more likely to go public than remain private. The ex-post analysis concluded that to finance their investments, dilute ownership, and rebalancing capital structure are the major motivations for going public. Pin and Wei (2006) investigate the components of going public decision by using 383 Taiwan IPOs floated during 1989-2000. They executed a panel probit model to empirically investigate the motivations for going public. Their results accomplished that Taiwan firms were not provoked by external capital needs. They also found bigger firms and profitable firms more likely to decide IPOs. Boehmer and Ljungqvist (2004) examine the German IPOs data listed from 1984 to 1995. They used hazard analysis to investigate the impact of the timing of IPO decision. According to the authors, probit and logit models used by previous researchers did not analyze the impact of time factor associated with explanatory determinants. They found that relative sales growth and profit margin with respect to other listed firms in the same industry were positively linked with going public decision; market valuations of firms listed in the same industry is also positively linked with the decision of going public, and uncertainty about future profitability is also another motivation for going public decision. Chun et al. (2002) estimate the determinants of going public decision of Korean IPOs by using the same method of Pagano et al. (1998). They used the sample of (i) 304 Korean public limited companies who went public during 1986-1995 and (ii) 1,722 Korean private limited companies who stay private during 1986 and 1995. They found that IPO firms went public only when stock market valuations were overvalued to seize the benefit of 'windows of opportunity' marginal low credit worthiness firms were more likely to go public than

high credit worthiness firms; a higher market/book value ratio of the same industry increases the probability of going public decision.

### *Theoretical Framework and Hypotheses Development*

Based on previous studies discussed in literature review, we developed saving-growth model interlinking FDI and real exchange rate as follows:

#### *Benefits Related Theories*

**a) Raising Capital for Growth and Expansion:** Many theoretical models state that only firms decide to go public to generate further equity funds to finance their expected future growth and expansion. Usually when firms exhausted from other financing alternatives due to high debt burden and have limited access to other sources tend likely to raise equity capital (Pagano et al., 1998; Huyghebaert & Hulle, 2005). Therefore, it is summarized that firms decide to go public tend to have a high debt burden and want to enhance capital expenditures.

*H0:* Firms enhance their investments through capital expenditure after deciding to go public.

*H1:* Firms having higher sales growth before IPO more likely to conduct IPO.

*H2:* Firms having higher financial leverage before IPO more likely to go public.

**b) Risk Diversification:** Huyghebaert and Hulle (2005) argued that firms making huge investments in new ventures to meet future growth are inclined to be riskier. The early sponsors' of these companies averse to invest more from their personal sources in these projects. Hence, they rely on external capital for these projects. Another related motivation behind a going public decision is to divestment or diversify wealth by initial sponsors (Pagano 1993; Stoughton & Zechner, 1998; Zingales, 1995; Chemmanur & Fulghier, 1999).

*H0:* Decide to go public is a motivation of ownership dilution by initial shareholders.

*H1:* Firms decided to go public expected riskier than firms remain private.

**c) Lower cost of capital:** According to Modigliani and Miller, (1963) companies decide to go public to reduce their weighted average cost of capital. Diamond (1991) argued that raise equity capital through IPO is an opportunity to generate cheap funds without the financial intermediary institutions. Trading in liquid equity markets increases the market visibility of the IPO firms and increased the bargaining power with banks for further financing.

*H0:* Firms having a higher cost of capital more likely to go public.

*H1:* Financial leverage significantly comes down after the decision of going public.

**d) Rebalancing Capital Structure:** Pagano et al. (1998) investigated that firms decide to go public to reduce their financial leverage. As per their findings, firms having a large portion of debt in balance sheet more likely to conduct IPOs to trim down the debt part in the capital structure. The cost

of equity such as dividends is not a permanent liability of issuing firms as compare to interest payments because only profitable firms offered dividends when funds left from the working and capital investments.

*H0*: The weighted average cost of capital comes down after the listing on the capital market.

**e) Liquidity:** Firms listed on stock exchanges provide liquidity in terms of easy transfer of ownership between shareholders. The capital market provides an opportunity to the investors from where they can easily trade of listed companies without bearing the large transaction cost (Boltan & Thadden, 1998; Booth & Chua, 1996). Unlisted companies' shares can trade only by informal ways through the intermediary by bearing a considerable transaction fee (Pagano et al., 1998).

*H0*: The large firms in terms of turnover and total assets are more likely to go public.

**f) Monitoring:** It's quite expensive in terms of time and effort to evaluate the private companies for new shareholders due to fewer disclosure requirements for all business related activities which are intrinsic value sensitive. Pagano and Roell (1998) argued that private firms have in possession of big shareholders such as initial owners and venture capitalists more inside information than others. Therefore, large shareholders intentionally raise capital through selling shares to largely dispersed investors to control the closed monitoring.

*H0*: The external monitoring increases after listing on the stock exchange due to boost capital expenditures and investment for large scale subsequent projects.

**g) Windows of opportunity:** Dharan and Ikenberry (1995) argue that managers are opportunistic and decide to go public only when they assessed the firms of same industry are overvalued. The aforementioned case was on the basis of followed suppositions: (i) managers take action for the wellbeing of principal shareholders; and (ii) managers have more inside information than others.

*H0*: The firms are more likely to go public when firms listed in the same sector are overvalued before the IPO.

**h) Publicity:** When firms decided to go public get publicity in terms of reducing the information gap between principal owners and external stakeholders. The stock prices and research analyst's views of publicly listed companies get coverage by electronic and print media and thus market participants can simply evaluate the worth of IPOs (Subramanyam & Titman, 1999). Stocughton et al. (2001) explain the decision of going public is considered as a signal of high-quality products in the product market.

*H0*: The firms related to general goods and services sector are more likely to go public to increase market visibility.

### *Costs Based Theories*

**a) Information asymmetry:** Information asymmetry is a situation when issuers have more inside information than outside investors about the intrinsic value. Chemmanur and Fulghieri (1999) investigated that due to information asymmetry issuers offer their stocks at a lower price than they expected to be. They suggested that adverse selection could be a barrier for small and younger firms who have less financial track record and visibility in the market.

*H0:* The likelihood of going public decision is directly linked with the firm age and/or firm size.

**b) Loss of confidentiality and Higher taxes:** In many countries, the Security and Exchange Commission (SEC) have more stringent disclosure requirements for publicly listed firms than the non-listed firms. Publicly listed companies are liable to disclose all price sensitive information to the general public through electronic and print media. Some out of compulsory disclosure may more sensitive with respect to high confidentiality for their competitive advantage. Some companies reluctant to go public due to this hazard (Maksimovic & Pichler, 2001; Yosha, 1995).

*H0:* There is a negative correlation between research and development expenses with the decision of going public.

*H1:* Firms pay more taxes after going public than firms remain private.

**c) Transaction and Subsequent Costs involve in IPO:** Ritter (1987) argue that initial expenses for listing and subsequent cost in terms of offer price discount usually discourage companies to go public. Some of the key expenses such as Lead financial advisor fees and authorized banker commission, initial expenses for legal services, printing and stationary expenses, road shows by underwriters and managers, ongoing legal, accounting and mailing expenses, and unforeseen expenses.

*H0:* There is a negative correlation between administrative and listing expenses with the decision of going public.

### **Methodology and Model Specification**

#### *Pre-IPO Characteristics Analysis*

Based on the existing literature, theoretical framework and developed hypotheses, we estimate probit model to determine the effect of pre-IPO characteristics on the occurrence of IPO event.

$\Pr(IPO_{it} = 1)$

$$= F(\beta_1 Size_{i,t-1} + \beta_2 FrmAge_{i,t-1} + \beta_3 IntAssets_{i,t-1} + \beta_4 Beta_{i,t} + \beta_5 SalesGrw_{i,t} + \beta_6 ROA_{i,t-1} + \beta_7 Disclsr_{i,t-1} + \beta_8 Leverage_{i,t-1} + \beta_9 MTB_{i,t-1} + \beta_{10} General_{i,t} + \epsilon_i) \dots \dots (1)$$

Furthermore, the equation (2) is estimated to control inter-industry effect and equation (3) is estimated to control the year effect through the one way random effect probit models of the decision to go public.

$\Pr(IPO_{it} = 1)$

$$= F(\beta_1 Size_{i,t-1} + \beta_2 Frm_{Age_{i,t-1}} + \beta_3 Int_{Assets_{i,t-1}} + \beta_4 Beta_{i,t} + \beta_5 Sales_{Grw_{i,t}} + \beta_6 ROA_{i,t-1} + \beta_7 Disclsr_{i,t-1} + \beta_8 Leverage_{i,t-1} + \beta_9 MTB_{i,t-1} + \beta_{10} Sector + \epsilon_i) \quad \dots \dots (2)$$

$\Pr(IPO_{it} = 1)$

$$= F(\beta_1 Size_{i,t-1} + \beta_2 Frm_{Age_{i,t-1}} + \beta_3 Int_{Assets_{i,t-1}} + \beta_4 Beta_{i,t} + \beta_5 Sales_{Grw_{i,t}} + \beta_6 ROA_{i,t-1} + \beta_7 Disclsr_{i,t-1} + \beta_8 Leverage_{i,t-1} + \beta_9 MTB_{i,t-1} + \beta_{10} Year + \epsilon_i) \quad \dots \dots (3)$$

Where IPOit is a dummy variable that is equal to 1 if the company 'i' goes public in the year t, and 0 if the firm stays private. F(.) is the cumulative distribution function of a standard normal variable. At any time t, the sample includes all firms who remain private at a particular point in time, and the firms that went public at that point of time. when a firm went public then dropped from the sample. The operational definitions and calculation of all above variables are mentioned in Table 1. The selections of explanatory variables in the panel probit model are based on extant literature and hypotheses included in the previous section.

### *Post-IPO Characteristics Analysis*

In addition to the pre-IPO characteristics analysis methodology, the possible consequences of going public decision on explanatory variables such as sponsor's ownership, financial leverage, investments, cost of credit and capital expenditures are estimated through analyzing the post-IPO variations in above factors. The justification of analyzing ex-post consequences were to identify what essentially had happen and relatively compare with factors that can encourage a firm to conduct an IPO transactions. The ex-post consequences of Pakistani firms are examined through comparing the ex-post data of explanatory variables with pre-IPO numbers using a three step process. First, the firm-wise percentage changes in the explanatory variables in the following two different time windows are calculated: (i) one year before going public (T-1) to one year after conducting an IPO (T+1), and (ii) one year before going public (T-1) to two years after conducting an IPO (T+2). Second, the median values of the firm-wise percentage changes in the explanatory variables are calculated separately for each two-time windows. Third, the 'Wilcoxon two sample signed-rank test' is used to investigate whether the median values of explanatory variables in the post-IPO time periods are



significantly different from pre-IPO values.

Table 1

*Definition and calculation of variables employed in this research*

Variable	Operational Definition
Size	Size is computed from the value of total assets
Age	Age is the difference between the date of incorporation and formal listing on the stock exchange
Int Assets	The ratio of Intangible assets over total assets
Beta	Beta is computed through regressing historical earnings of each IPO against the average earnings of the whole market. As: $R_{it} = \beta_i R_{mt} + u_i$ where $\beta_i$ is the beta for 'i'th IPO firm, ' $R_i$ ' is the return of 'i'th firm, ' $R_m$ ' is the market returns of benchmark KSE100 index. Accounting return will be calculated by earnings before interest, taxes, amortization, and depreciation (EBITDA) over total assets fraction.
Sales Grw	Average sales growth in the last three years before going to public
ROA	ROA is computed as EBITDA over total assets ratio
Disclsr	Disclosure is estimated through the ratio of corporate taxes paid and total turnover of IPO firm.
Fin_Leverage	The ratio of Debt-equity measured by dividing total borrowings of the IPO firm over net worth.
MTB	The median value of industry market value over book value (MTB) ratio.
General	Dummy variable equals 1 if a firm belongs to general goods and services industry and 0 otherwise
Sponsor's ownership	A person who is empowered by the company. It is calculated by percentage shareholding out of total outstanding shares.
Capital Expenditures	Lagged value of capital employed to total assets
Investments	Investments in quoted and unquoted financial securities given in financial statements.
Cost of Credit	Cost of credit is computed through the ratio of interest expense paid over total borrowing from financial institutions

### *Data and Sample*

The study begins with the complete list of all IPOs floated on KSE during 2000 to 2014. The sample was taken out of 113 companies that went public during a sample period. The study did not include before 1999 newly listed companies primarily for two reasons: (1) many authors highlight the issues of “fly-by-night” industrialist who wear down the investors' investment from 1991 to 1997; (2) after 1998, KSE introduced computerized trading platform with full automation of back-office operations such as electronic cash settlement and electronic transfer of shares facilities. From 2000 onward, Securities and Exchange Commission of Pakistan (SECP) introduced more stringent



regulations. During the collection of data, we dropped few firms due to three main reasons: (1) it was explored that values were missing of few ex-ante and ex-post variables. (2) The values of some variables were not completely available for all the time window periods. (3) Excluded mutual funds, firms offered preference shares, listing without undertaking IPOs, venture capitalists, and modaraba firms because these firms are not comparable. We also dropped firms that went public after 2014 because methodology required data three years prior IPO and two years aftermarket listing. The final sample of this study consist of 70 firms.

## Results and Discussion

### *Descriptive Statistics*

Table 2 highlights the descriptive statistics of variables used in pre-IPO characteristics analysis. The average firm size of sample firms is 28,260 million (PKR) assets with the standard deviation of 88.832 million. The average age of sample firms is 15years approximately with the standard deviation of 16 years approximately, indicating firms decided to go public are on-average young firms. The summary statistics of variables used in probit model and post-IPO analysis are reported in the Table 2 and Table 3 respectively.

Table 2

*Summary Statistics of variables used in Probit model*

Variable	Mean	Std. Dev.	Max	Min	Obs.
Size (mn PKR)	28,260.104	88,832.623	590,291.468	126.261	70
Age	14.899	15.864	58.000	0.000	70
Intangible Assets (mn)	114.036	444.544	2,567.310	0.000	70
Beta	0.324	0.560	0.979	-0.841	70
Sales Growth	82.866	158.773	955.000	-90.430	70
Return on Assets	16.191	49.450	378.535	-56.297	70
Disclosure	7.601	21.243	167.509	0.000	70
Leverage	53.872	23.279	95.221	0.013	70
MTB	1.58	1.3802	9.18	-1.60	70

Table 3  
*Summary statistics of variables used in post-IPO analysis*

Variable		Mean	Std. Dev.	Max	Min	Obs.
Sponsors' Ownership(%):	T+0	69.1941	21.2022	100.0000	25.0000	68
	T+1	59.7935	17.9582	95.6982	22.3638	68
	T+2	58.7275	16.5012	95.6982	20.0000	68
Capital Expenditure(%):	T+0	40.0491	31.1619	99.8634	0.0475	68
	T+1	38.2361	30.9440	96.1728	0.2341	68
	T+2	38.8394	30.9759	98.2057	0.1969	68
Investments: (mn)	T+0	4,883.230	18,693.294	119,587.476	0.254	68
	T+1	7,474.671	30,294.184	177,942.251	0.511	68
	T+2	7,172.894	25,921.979	144,735.672	1.281	68
Cost of Credit: (%)	T+0	7.1786	8.5926	54.9216	0.0020	68
	T+1	6.6220	7.3708	43.7742	0.0011	68
	T+2	7.7056	7.0265	43.7742	0.0052	68
Debt to Equity: (%)	T+0	59.3909	22.2833	113.5897	14.4726	68
	T+1	58.3596	22.8448	96.6019	6.6924	68
	T+2	61.3063	28.6160	204.5723	6.4140	68

It can be seen from Table 3, the average sponsors' ownership decline from 69% to 58% in post-IPO periods. Results indicate that decision for going public helped to dilute ownership after going public. The average capital expenditure not significant changes after the listing of IPO firms. The average investment in subsequent years increased by PKR 7.1bn from 4.8bn. The average cost of credit and debt to equity ratios also not changed significantly in ex-post periods.

#### *Probit Analysis*

Table 4 shows the results of maximum likelihood estimates of probit models. Model-1 is a simple probit estimation of the probability of going public decision. Model-2 and model-3 are used to control for inter-industry effect and for year effect by using one-way random effect models.

Table 4

*Determinants of going public decision by using probit models*

Variables	Model-1	Model-2	Model-3
Constant	* -5.2589	0.1669	0.1879
MTB	* -0.0009	* -0.0192	-0.0161
Age	*** 0.4274	** 0.0042	0.0008
Size	** 0.0009	** 0.0770	** 0.0802
Intangible Assets	** -0.0347	** -0.0092	*** -0.0096
ROA	** 0.0009	0.0024	** 0.0034
Disclosure	-0.0035	-0.0001	-0.0006
Sales Growth	*** -0.00095	*** -0.0007	*** -0.0008
Beta	-0.4496	-0.0122	-0.0221
Financial Leverage	-0.0347	-0.0001	-0.0002
General	* -0.0010		
McFadden R-squared	0.392209	0.3776	0.3010
Log Likelihood	-40.5015	-39.0156	-39.1010
Observations	165	165	165

\*\*\*, \*\* and \* specify significant at 1%, 5% and 10% respectively

Table 4 reports that probability of going public is positively related to ‘Firm size’ and a rise in the standard deviation of firm size increases the probability of going public more than the sample average probability of going public. The findings of firm size estimate is statistically significant and consistent with proposed hypotheses related firm’s size, and with other emerging countries; Korea (Chun, Lynch & Smith, 2002), Thailand (Chorruk & Worthington, 2010), and India (Mayur & Kumar, 2013). Results of probit model indicates that firm age is positively linked with probability of going public and significant at 1% level, but these results are varying with proposed hypotheses related firm age and with an extant literature on emerging economies; Thailand (Chorruk & Worthington, 2010) and India (Mayur & Kumar, 2013) but these results are consistent with developed countries; Germany (Boehmer & Ljungqvist, 2004) and United State (Chemannur, He & Nandy, 2005). Industry market value to book value ratio (MTB) found negatively related to the probability of going public decision and statistically significant at level 10%. But these results are not consistent with proposed hypotheses and with an extant literature on emerging economies and only consistent with Germany (Boehmer & Ljungqvist, 2004). The results indicate that firms decide to go public when they need funds for their expansion or others instead to take advantage of higher industry MTB. Intangible assets to total assets

ratio (IA) found negatively related to the probability of going public and statistically significant at level 5%. The results of this variable vary with proposed hypotheses that firm having large intangible assets perceived as riskier firm and their probability of going public is higher projected.

EBITDA to total assets (ROA) ratio found a positive relationship with the probability of going public and this relationship is statistically significant at level 5%. The results also verified the proposed hypotheses related profitability and likelihood to conduct IPO. The results also confirmed that Pakistani firms reduced adverse-selection cost by signaling their financial position through their prior IPO higher ROA. An extant literature on this association showing mixed results such as Lynch and Smith (2002); Mayur and Kumar (2013) found the positive relationship and Chorruck and Worthington (2010) found statistically negative relation between prior IPO profitability and probability of going public. Table 4 indicates that 'Disclosure' is found negatively correlated with the probability of going public. Unlikely, results are not consistent with proposed hypotheses related transparency. Results depict that firms having less transparency are more likely to go public showing a magnitude of future risk. On the other hand, possibility of conducting IPO is based on the industry-specific because there is no significant relationship with the industry controlled model. Prior IPO sales growth found a negative association with the probability of going public and statistically significant at level 1%. Unlikely, results are not consistent with proposed hypotheses that prior IPO sales growth is associated with higher future capital expenditures for expansion. But extant literature has mixed findings on this relationship such as Chorruck and Worthington (2010) found a negative relationship with growth, but Chun, Lynch and Smith (2002); Mayur and Kumar (2013) found the positive association with prior sales growth. Table 4 also shows that 'Beta' and 'Financial leverage' are found negatively correlated with the probability of going public and statistically insignificant. However, an extant literature on financial leverage has mixed findings in both developed and emerging economies about the degree of financial leverage and decision for going public.

#### *Post IPO Analysis*

Table 5 presents the results of 'Wilcoxon two-sample signed-rank test' of the two-step process (already discussed in methodology part).

Table 5  
*Post-IPO Factors Analysis*

Variables	Median Changes (%) From IPO (TO) to IPO(T+1)	Median Changes (%) From IPO (TO) to IPO(T+2)
Sponsors' Ownership	*** -7.8307 (4.3850)	*** -13.4227 (4.9854)
Capital Expenditure	** 15.2087 (4.885)	* 24.5292 (5.331)
Investments	** 12.9769 (3.2348)	** 21.8039 (3.6029)
Cost of Credit	0.0000 (0.3267)	** 12.0263 (2.9078)
Debt to Equity	-1.2569 (0.5102)	-0.2979 (0.5224)

\*\*\*, \*\* and \* specify significant at 1%, 5% and 10% respectively

The sponsors' ownership reduced by (i) 7.83% after the first year of IPO and, (ii) 13.4% after the two years from the IPO year. These reductions in ownership are statistically significant at level 1% each. The significant drop in sponsors' ownership in the subsequent years point out that the initial investors dilute their ownership to diversify their risk. These results are consistent with Mayur and Kumar, (2013); Pagano et al. (1998). Results indicate that capital expenditures increased by (i) 15.21% in after the first year, and (ii) 24.53% in after two years from the IPO year. These all increases statistically significant at 1% level each. Boehmer and Ljungqvist (2004), and Mayur and Kumar (2013) also found firms increased their capital expenditure after going public to reduce external monitoring by large stakeholders but these results contradict with the results of Pagano et al. (1998). The level of investments also increased by (i) 12.97% in after the first year, and (ii) 21.80% in after two years from the latest financial year. The incremental changes are statistically significant at level 5% each. Firms decide to go public when they need more funds as a capital expenditure and investments to finance their growth and expansion. Results are consistent with Mayur and Kumar, (2013); Chun et al. (2002). The cost of credit: (i) remained same in after one year from the latest financial year before IPO; and (ii) increased 12% in after two years from the latest financial year before the IPO. The debt to equity ratio decreased by (i) 1.25% in after one year from the IPO year, and (ii) 0.29% in after two years from the IPO year (not significant results). A decision of going public helps firms to reduce their financial leverage and rebalance their capital structure. Pagano et al. (1998), Chorruck and Worthington (2010), and Mayur and Kumar (2013) found that firms use IPO proceeds to realign their capital structure.

## Conclusion

The present study examines the motivations for going public decision by using pre-IPO characteristics and ex-post consequences of the same listed firms on KSE during 2000 to 2014. The results of probit analysis reveal that prior IPO characteristics indicate Pakistani firms went public, tend to younger, riskier, more profitable and large firms than the firms remain private. Firms belong to general trade industry are more likely to go public. The results of ex-post consequences analysis reveal that firms decide to go public: (a) to increase capital expenditures aftermarket listing to finance their future growth and expansions; (b) increase investments to diversify their business operations such as investments in holding companies, associated companies, and financial assets; (c) going public decision is used to dilute their ownership and diversify their risk; and (d) going public decision is also used to rebalance their financial leverage and reduce the burden of financial distress. This study helps portfolio managers to take an informed decision about IPO firms to earn superior returns. Market regulators, underwriters and stock exchanges can conduct seminars and road shows to educate unlisted firms about pros and cons of going public decision under the findings of this study. There are a few limitations of this study as (a) Sales growth and capital expenditures used as proxies for a need for financing, growth and cost of credit are still debatable. In future, few other variables in pre-IPO and ex-post IPO analysis can be added such as asset risk, index volatility and total factor productivity used by developed countries researchers. In the post-IPO analysis, the time windows can also increase from 'one year before IPO to two years after IPO' to 'two years before the IPO to five years after IPO' to better understand the post-IPO consequences.

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