Monitoring by Institutional Investors and its Influence on Equity Issue[1]

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ABSTRACT

This study has made an attempt in isolating the effect of information asymmetry between the investors' class and governance efficiency. Equity issuance through qualified institutional placements (QIP) in Indian capital market provides an opportunity to delineate the effect of these two parameters. QIP placements in essence allow institutional investors (informed investors) to offer premium only if the existing investors are perceived to be active monitoring agents having possibility of improving the firm performance through improved governance norms. It is proposed here that any premium paid by these investors in the QIP issue would directly reflect the expected increase in value. All else being equal, this increase in value is attributed to monitoring by existing institutional investors with perceived improvement in the governance norms. The empirical results indicated that the premium paid is not related to the percentage of existing institutional ownership up to 2012. However, change in the regulation allowed the discount after 2012 where we observe that the ownership of mutual fund investors reduces the probability of obtaining premium whereas foreign institutional investors increase the probability of obtaining premium.

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1. Introduction

Ownership structure defines the governance mechanism of a firm. The governance mechanism determines agency cost which influences the firm performance. Proportion of insider ownership and institutional investors determines the ownership pattern which influences the utility of other stakeholders (Fama and Jensen, 1983). The existing literature links the relationship between ownership structure and firm performance which is a manifestation of agency cost occurred due to the degree of divergence of cash flow rights and controlling rights (Jensen and Meckling, 1976). The agency cost is divided into monitoring cost, bonding cost and the residual loss. Given the above, governance mechanism that defines the degree of separation of owner-manager has significant role in determining the agency cost and is closely linked with the firm performance. Given the country specific exogenous factors this relationship will either mitigate or accentuate the agency cost since the ownership structure is endogenous in nature.

The review of corporate governance literature links the significance of ownership structure with the firm performance. The empirical evidence leaves with inconclusive results making it difficult in generalizing the relationship between these two. One of the reasons for inconclusive results is attributed partially to the proxy measures of performance. Another reason is the result of interaction between the complexities associated with the ownership structure such as endogeneity of insider ownership, managerial entrenchment hypothesis, monitoring hypothesis, agency theory and information asymmetry. These aspects associated with the ownership structure are intertwined and isolating effect of one from the other is difficult. Therefore, analyzing the effect of ownership structure on firm performance suffers from biases while considering the proxy measures of firm performance. In such situation, accounting based performance measures and market based performance measures lead to difference in the results. Many studies point out merits and demerits of using accounting based measures of firm performance and market driven performance measures and find evidence of inconsistent results based on these two different proxy measures of performance (Dybvig and Warachka, 2010). The accounting based measures takes inputs from balance sheet data which is historic in nature. The data is also likely to be correlated in the multi period model and static in nature suffers from the limitation in reacting to any additional information instantaneously. On the other hand the market based performance measures

immediately accommodate the new information reflecting it in the stock prices. Therefore, degree of information asymmetry plays critical role in determining the market valuation of a firm.

The linkage between the ownership structure and firm performance has resulted in inconclusive results due to difficulty in delineating the effect of information asymmetry and participation by heterogeneous class of investor. The conflicting results are also due to the proxy measure adopted to evaluate this relationship. The ownership structure of a firm is endogenous in nature which defines the governance mechanism. While analyzing the impact of ownership structure on market performance, controlling the effect of information asymmetry and heterogeneity of investors' participation will enable to substantiate the true linkage between ownership structure and firm performance. Market prices quickly react to any new information and suffer due to higher degree of information asymmetry.

Initial equity offerings and its prices are significantly influenced by degree of information asymmetry (Rock, 1986). The information asymmetry plays critical role in determining the choice between different types of equity offerings (seasoned equity offerings (SEO), rights issue, private placement etc.) and its prices (Cronqvist & Nilsson, 2005). The participation of different classes of investors with heterogeneous expectations of their investment objective brings larger variability in the equity prices (Miller, 1977; Rock, 1986). Against this backdrop when we analyze the relationship between ownership structure and firm performance, it is difficult to isolate the effect of heterogeneity of investors' expectation and information asymmetry on the equity prices. Inconclusive results in establishing the relationship between the ownership and firm performance is attributed to interaction between these two. The ownership structure is endogenous in nature whereas the investors' participation and the market prices of equity are exogenous in nature.

In such situation, the study of equity offerings through qualified institutional placements in India provide ideal situation by controlling the effect of information asymmetry and heterogeneity of investors' participation. The process of offer set by the regulatory structure itself involves institutional investors only as prospective investors to participate in the issue. This brings homogenous participation of institutional investors where information asymmetry is minimum.

In this study we analyzed the equity offerings of qualified institutional placement (QIP) which is a variant of private placement where only institutional investors participate in the

equity offerings. Therefore, the price variation due to heterogeneity of investor participation is controlled. The reason is all the participants are institutional investors (qualified institutional buyers –QIBs) who are informed investors by nature. Therefore, QIP issues are less likely to suffer due to information asymmetry and heterogeneity. Another peculiar characteristic of QIP issue is that the minimum price of the issue is set to regulatory prescribed price derived through historical trading price.

Given the above, QIP issues are observed to obtain premium over and above the minimum regulatory price. Therefore, we argue that QIP investors will offer premium price over and above the minimum regulatory price only if they perceive the existing ownership structure will reduce the agency cost (by reducing monitoring cost) and increase the governance efficiency. This effect is translated into value addition through the monitoring effect of institutional investors. Therefore, this study is aimed at analyzing the role of existing ownership structure in fetching the price premium for QIP issues in Indian market. The remaining paper is organized as following. Section 2 describes related literature in the context of the objective of this study. In section 3, we discuss the Indian regulatory environment related to QIP issues in detail. Section 4 forms the basis for hypothesis. Section 5 describes data and methodology followed by results and discussion in section 6. Summary and conclusion follows in Section 7.

2. Related Literature

The agency cost consists of monitoring cost, bonding cost and residual cost where the principal has to incur monitoring cost if he/she appoints the agent to manage various operational activities (Jensen and Meckling, 1976). Therefore, in case of separation of owner-manager, the monitoring and bonding cost increases. As an alternative to reduce the monitoring by the owner, there are various mechanisms that firms put in place to control the entrenchment of managers such as availing debt in the capital structure (Williamson, 1988). Another important mechanism is considered through the ownership structure of a firm. The ownership concentration of external investors helps in reducing the agency cost by aligning the cash flow and control rights. The involvement of large and institutional- informed shareholders leads to better monitoring activity (Demsetz, 1983; Shleifer and Vishny, 1986).

Monitoring hypothesis links the relationship between the ownership stake by institutional investors, effectiveness of governance mechanism and firm value which is widely explored in the literature. Shleifer and Vishny (1986) support monitoring activity by institutional

investors. They identified that the institutional investors' have stronger motivation to monitor due to their larger stake of shareholding. The larger ownership stake also helps the institutional investors to take any corrective action by exercising their voting rights against any inappropriate decision by the board. Agrawal and Mandelker (1990) also support active monitoring hypothesis by institutional investors resulting in positive effect on shareholders wealth and also helps in antitakeover charter amendments. These studies support active monitoring hypothesis associated with the institutional investors. However, there are evidences where institutional investors are revealed to be opportunistic in nature and sell their ownership stake in adverse circumstances rather than taking active role in corrective measures. Therefore, the relationship between ownership stake by institutional investors and firm performance is not found significant (Wahal, 1996; Duggal and Millar, 1999). The above mentioned studies reveal that institutional investors who are well informed investors by nature can opt the role of active investors through monitoring corporate activities or passive investors who are opportunistic in nature and will exit through the investment at adverse conditions.

Any equity issuance by a firm brings changes in the ownership structure and concentration of various investors' category constituting the ownership structure. As a result, when a listed firm decides to issue equity through private placement, the market reacts to this information and market valuation of a firm is influenced. Empirical evidence of a market reaction of private equity issuance shows mixed results having positive as well as negative impact on stock prices in different economies. Some studies in the literature supports that private placement increases the ownership of block holders and hence their monitoring activity helps in reducing agency cost and information asymmetry. As a result, post issuance of private placement of equity market shows positive reaction resulting in the increase of firm valuation and performance (Wruck, 1989; Herzel and Smith, 1993; Wruck and Wu, 2009). On the other hand, Wu, (2004) and Barclay et al., (2007) support management entrenchment hypothesis and found that most often managers allocate privately placed equity to passive investors to maintain the control in their hand. Therefore, investors do not participate in monitoring the firm and do not increase the firm value. Ex-post market reaction of equity issuance to informed investors through private placement is manifestation of monitoring hypothesis or perceived monitoring act by institutional investors by other market participants.

The private equity issuance is also linked with the signalling effect. Herzel and Smith (1993) find that issuance of equity through private placement results in positive returns since it is

offered at discounted price. The price discount is induced to provide an incentive to the investors compensating for the cost of information acquisition. The positive returns helps in conveying positive signal in the equity market. Therefore, they conclude that institutional investors' increase firm value through monitoring. These findings support the earlier study by Wruck (1989) which observed that monitoring activity by institutional investors leads to increase in the wealth of shareholder by 4.5%.

The decision of selection of financial instruments plays an important role in providing competitive advantage to the firm strategically (Folta & Janney, 2004). The studies have identified that degree of information asymmetry is an important determinant in choosing public versus private equity issuance (Wu, 2004; Gomes & Phillips, 2004). Wu (2004) finds that firms, issuing equity through private placement possess larger degree of information asymmetry than the firms that offer public equity. The private placement of either debt or equity is relatively easier mode to obtain the capital in terms of regulatory compliance related to the issues. Folta & Janney (2004) observed that private placement of equity provides long term strategic benefits to the firm by reducing the negative effect created by information asymmetry. The smaller firm opts for private placement of equity because the degree of information asymmetry is higher and the earning performance of a firm is also not attractive (Dewa & Ibrahim, 2010).

Given the above evidences in the literature, it is inferred that the issuance of private equity, its prices and post issuance firm performance is significantly driven by degree of information asymmetry. The participation of different types of investors is significantly governed by the country specific regulatory environment related to equity issuance.

Our study is aimed at analyzing pricing of qualified institutional placements in Indian market. These equity issues show certain distinguishing feature in comparison to privately placed issues those are generally observed in other markets.

3. Indian regulatory environment in the context of private placement

The activity of raising equity capital in Indian capital market is growing over a period of time. Indian capital market regulator, Securities and Exchange Board of India (SEBI) allows firms to raise capital through different types of equity issues such as initial public offering (IPO), further public offering (FPO), rights issue and private placement. The issuance of equity in the form of private placement is of three different types. One is private placement

which is meant to raise equity for unlisted firms. Another is known as preferential issue for listed firms where firms can issue shares to a person or select group of persons and lastly qualified institutional placements (QIP) are extended by the issuer to qualified institutional buyers (institutional buyers) only as defined in Chapter I, 2 (1, zd) of Issue of Capital and Disclosure Requirements (ICDR) document. The difference between preferential issue and QIP is that former one allows issuance of equity shares to promoters, employees or any group of people and this issuance is subject to lock-in period of three years for promoters and one year for allottee other than the promoter. QIP issues are allotted to only institutional investors having no specific lock-in period. The constraint of minimum price is applicable to preferential issue as well as QIP issue, however, method of computation is slightly different.

In Indian context, equity issue by a listed firm to only institutional buyers is referred as Qualified Institutional Placement. This method of equity offering was approved on May 8, 2006 by Securities and Exchange Board of India (SEBI) and since then QIP became an important route of raising equity capital for Indian firms. The objective of a regulator to introduce QIP offer was to promote domestic issuers and attract domestic equity investment through QIP.

QIP has received large response in comparison to public offers. For the financial year ended at 2014, Indian capital market experienced total 38 IPOs raising Rs. 1236 crore, 2 FPOs raising Rs. 7457 crore and 15 rights issues for the amount of Rs. 4576 crore. In comparison with these different types of public equity issues, the capital raised through QIP offers is accounted for Rs. 9562 for the same year. These facts make it evident that Indian listed firm prefers the QIP as one of the important route to raise the equity capital. Therefore, this shows that equity issued through QIP is significant and comparable to other types of public issues. The process of QIP is subject to less regulatory compliance as compared to FPO or rights issue. This makes relatively less time consuming for a firm to opt QIP route for raising equity capital. As a result, capital raising activity through QIP is observed significant[2].

Setting of minimum price derived through historical trading is one of the differentiating characteristic of Indian QIP issue. Pricing of the issue has to be made in accordance with chapter VIII, clause 85 of Issue of Capital and Disclosure Requirements Regulations, 2009 (ICDR). Based on this clause, the minimum price of QIP is determined as average of weekly high and low of closing prices in preceding two weeks from the relevant date. Clause 85(1)

[2] Data Source: SEBI annual report for the year 2013-14

of the ICDR Regulations allows the issuer to offer the issue at a discount upto 5% of the floor price with the prior approval of shareholders. The provision of offering the QIP issue at discounted price was introduced by SEBI on 12th October, 2012 through an amendment to ICDR regulations.

In addition to the price constraint, the number of allottee is also controlled and the minimum allotment should be made to at least two allottees for an issue of size up to Rs.250 crores and at least five allottees for an issue greater than Rs.250 crores.

QIP process involves relatively less regulatory compliance procedures compared to other capital raising routes. It does not involve any pre – issue filing document submitted to SEBI. The company has to obtain the shareholders approval for the allotment of securities through QIP. The process of allotment of the securities shall be complete within 12 months from the date of shareholders approval.

The process of QIP involves investment banker who act as an intermediary to help the firm in carrying out the process of QIP. The investment bank carry out the process of due diligence and provide the certificate to the exchange to obtain the approval of listing of securities offered through QIP in compliance with the regulatory requirement. The placement document is posted on the website of the stock exchange. In addition, the investment banks circulated the serially numbered application forms (either in electronic form or physical form) to the QIBs (select investors). The company and the investment bank have complete discretion on the process of whom to distribute the application forms. The QIB that does not receive the serially addressed application form cannot participate in the issue. The QIB investors are not allowed to withdraw the bid once the issue is closed however bids are allowed to revise till the issue closing date.

Once the bids are collected and the issuer in consultation with merchant bank finalizes the issue price. Similarly, issuer and the merchant banker in consultation with each other finalize the allocation process. The allocation to the investors need not be in the proportion of number of shares that the investors have applied for. The entire process is not completely transparent unlike the book building process of IPO. Since the issuer has complete discretionary power of allocation and price determination, there is a probability of having bias regarding the allocation to particular institutional investors.

Since minimum price is fixed by the regulator, the institutional investors can compete with each other by offering premium to obtain the issue. The institutional investors are sophisticated and well informed. Therefore, premium offered by them for private placement is prejudged on the basis of value of the firm. There are instances where investors may not offer premium and will procure the equity shares at regulatory minimum price only. The provision of offering the issue at discount is approved by SEBI in 2012. SEBI made an amendment in QIP regulation in 2012 to allow the issuer to offer the issue at a maximum of 5% discount on the floor price subject to prior approval of shareholders.

4. Hypothesis Development

Mello and Parsons (1998) identified an important link between ownership pattern and firm value. They deduced that ownership structure of a firm influences firm value and performance. On the contrary, Demsetz and Villalonga (2001) do not find significant relationship between the firm performance and ownership structure. While evaluating the influence of ownership structure on firm value in the capital market, there are two different factors act simultaneously. One is governance effect of firm and second is degree of information asymmetry. Both these variables have found significant influence on the stock prices. The ownership stake of promoters and other institutional investors act as a signal of firm quality and risk taking behaviour of a firm (Courteau**,** 1995). Often institutional investors such as mutual fund, private equity and foreign institutional investors are block holders and their monitoring activity leads to better governance and results in improved firm performance. Therefore, the ownership stake of institutional investors has positive impact on the firm value.

In addition to governance related factors, the price of equity issues get significantly influenced by the degree of information asymmetry. Degree of information asymmetry is higher for the new issues (initial public offerings). As a result, enormous literature in the field of IPO underpricing attribute the degree of information asymmetry as one of the important reason for observing IPO underpricing (Rock, 1986). Miller (1977) argues that every investor will have a forecast about the firm value which will differ from each other. As a result, heterogeneity of investors' class participating in an equity issue and their expectation has significant impact on the equity prices.

The aforementioned evidences create conflict when one would like to generalize the influence of governance and information asymmetry on the equity prices. The simultaneous

influence of ownership structure and information asymmetry is complex and therefore, it has led to inconclusive results in linking the ownership structure with the equity price. The study of QIP has advantage where the placement by its nature controls the degree of information asymmetry. The structure of QIP involves only institutional investors (informed investors). While analyzing the price discovery process associated with QIP, the participation of investors group is quite homogenous in nature. In addition, all the prospective investors are informed investors, where the probability of price being influenced due to information asymmetry is minimised. As a result, price neither gets affected due to the competition between various classes of investors nor due to degree of information asymmetry between various classes of investors as mentioned by Miller (1977). Therefore, these equity issues totally control the heterogeneity and degree of information asymmetry to the minimal. Hence this study argues that the residual influence on the price discovery of QIP equity issue is solely due to the governance effect. Therefore, as we observe the deviation of QIP price from its floor price (either premium or discount) is purely based on the ownership structure. The QIP issue will bring in significant change in the proportion of the institutional investors since all the prospective investors of QIP issue are institutional investors. The QIP investors will be likely to pay the premium only if they perceive the probability of better corporate governance based on the monitoring activity of existing institutional investors. Therefore, the existing ownership structure of a firm, which includes institutional investors and other blockholders is likely to influence the probability of obtaining price premium/discount due to the monitoring effect as perceived by new institutional investors. Against this backdrop, the study proposes following hypothesis.

H_1: The proportion of existing institutional investors has significant positive impact on the probability of obtaining premium for QIP issue

5. Data and Methodology

5.1 Data and Data Description

The data considered for this study includes equity issues through QIP in Indian market between September 2006 and December 2014. The list of QIP offerings is collected from NSE website and details of the issue such as floor price are obtained through the placement document of QIP. The data regarding various firm specific variables and ownership details are obtained from Prowess database of Centre for Monitoring Indian Economy (CMIE).

Indian capital market witnessed 189 issues till 2014. The QIP issue by DLF Limited resulted in conflict where shareholders filed writ petition in Delhi high court questioning the company being allowed to raise money through QIP. Therefore, this particular QIP issue is omitted from our sample. Therefore, there are total 188 issues in our sample. Out of total 188 QIP issues 45 issues are offered at regulatory floor price, 111 issues fetched premium over and above the regulatory price and 32 issues are offered at discount. SEBI made an amendment in QIP regulation in 2012 to allow the issuer to offer the issue at a maximum of 5% discount on the floor price. Therefore, the issues that are observed at discount (32) are during the year 2013 and 2014 only.

Indian capital market witness large number of QIP issues during 2009 and 2010. Year 2008 experienced very few issues relatively. During 2006 to 2008, all the QIP issues received premium price over and above the regulatory price. As mentioned in the previous section SEBI made an amendment in QIP regulation and allowed to offer the issue at discounted price up to 5% on the floor price in 2012. Therefore, only in year 2013 and 2014 the QIP issues are offered at discounted price. Following table presents the year wise trend of QIP issues and frequency of issues offered at premium, discount and regulatory floor price. Table 1 presents the yearwise frequency distribution of QIP issues and compares the issue price obtained with the regulatory floor price.

Table 1: Yearwise frequency distribution of QIP issues

	Number of Issues offered at			
	Floor price	Premium	Discount	Total
2006	0	11	0	11
2007	0	25	0	25
2008	0	6	0	6
2009	19	31	0	50
2010	15	21	0	36
2011	1	6	0	7
2012	7	5	0	12
2013	0	3	6	9
2014	3	3	26	32
Total	45	111	32	188

The focus of our study is to analyze the effect of ownership structure more specifically institutional investors of a QIP issuing firm in influencing the probability of obtaining premium or discount for the QIP issues. Therefore, we consider only 156 QIP issues which

are offered at floor price and at premium price while analyzing the probability of premium. This situation was valid till October 2012. After 2012, due to amendment in the QIP regulation, after 2012 we have a situation where the probability of obtaining discount is also possible. In this study we also consider the QIP issues which are at premium and discount to analyze the probability of obtaining the premium or discount.

We compute the QIP premium in percentage with respect to regulatory floor price as follows.

$$QIP\ Premium = \frac{Issue\ Price - Floor\ Price}{Floor\ Price} * 100$$

Age of the firm since its inception and listing both are considered important to determine the degree of information asymmetry. For QIP issuing firm, the two different ages are considered for analysis and calculated as follows.

Year t is considered for the QIP issuance year

Variable Description

LnIssueSize – Natural logarithm of issue size offered through QIP in rupee million

Age 1 - Number of years between year of incorporation and listing year.

Age 2 - Number of years between listing year and QIP issuance year.

LnAge2 – Natural logarithm of number of years between the listing year and QIP issuance year

$Asset_t$ - Total asset of the firm at QIP year in Rupees Million

$MarketCap_{t-}$ Market capitalization at BSE at QIP year in Rupees Million

GroupAffiliation – A binary variable which defines group affiliation of a firm. It takes value one if the firm is affiliated to business group otherwise zero.

ROA_t – Return on total asset which is computed as ratio of profit after tax to total asset at QIP year

$TobinQ_t$ – Computed as (market capitalization + value of preferred equity + debt) to total asset

$TotalInstiOwner_t$ – Ownership by institutional investors in percentage at QIP year

FII_t – Ownership stake by foreign institutional investors (FII) in percentage at QIP year

$TotalBlockholder_t$ – Total ownership by all investors who have ownership stake more than 5% in a QIP year

$PromoterHolding_t$ - Ownership stake by promoters' in a QIP year

$Mutual\ Funds_t$ - Ownership stake by mutual funds in percentage at QIP year

$Insurance_t$ - Ownership stake by insurance companies in percentage at QIP year

DFI_t - Ownership stake by domestic financial institutions (DFI) in percentage at QIP year

Table 2 presents descriptive statistics of the sample of QIP issue with significant firm specific and issue specific characteristic. The average size of the QIP issue offered is Rupees 4936.21 million. In Indian business environment, the family ownership and business groups play significant role in capital market. A business group affiliated firm in India exhibit differentiating characteristics that influence the performance of a firm (Khanna and Palepu, 2000). The ownership structure of these firms also differs having larger stake of family ownership. Therefore, valuation of such firms can have significant impact in obtaining the premium. Hence, this study has considered business group affiliation as one of the important variable to study its influence on QIP premium. In the multivariate analysis we control for group affiliation and promoters ownership stake.

Table 2: Descriptive statistics of QIP sample and other variables

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Issue Size (Rs. Million)	188	225.23	80316.48	4936.21	8991.81
Age 1 (years)	185	1	110	19.28	22.27
Age 2 (years)	188	1	57	13.22	10.65
$Asset_t$ (Rs. Million)	188	1245.20	17945700.80	252226.48	1369250.18
$MarketCap_t$ (Rs. Million)	188	464.98	2296832.12	84268.13	208692.95
$TobinQ_t$	188	8.45	898.17	163.39	154.67
$PromoterHolding_t$ (%)	168	7.54	82.49	45.92	15.54
$Blockholder_t$ (%)	174	5.42	85.83	43.60	17.63
$TotalInstiOwner_t$ (%)	178	1.30	94.85	51.55	22.60
Mutual $Funds_t$ (%)	188	0.00	25.26	7.13	6.41
$Insurance_t$ (%)	188	0.00	15.26	1.67	3.06
DFI_t (%)	188	0.00	18.32	1.52	2.70
FII_t (%)	188	0.00	94.86	21.50	13.07
ROA_t (%)	186	-35.58	29.49	3.68	5.85
Premium (%)	188	-5.01	96.87	4.38	14.54

Out of total sample of 188 issues, 107 issues are offered by the firms that are affiliated to business group. Out 107 issues, 71 issues were offered at premium (66%), 16 issues are offered at discount (15%) and 20 (19%) issues were floated at regulatory floor price. The average size of QIP issue offered by business group affiliated firm is rupees 6175.23 million as compared to rupees 3299.48 million by the issue offered by non business group affiliated firm. This shows that average issue size of QIP issued by business group affiliated firm is larger as compared to QIP issue by individual firms.

On average the issues obtained 4.38% of price premium over and above the regulatory price and shows maximum discount of 5% which is within the regulatory permissible limit. However, the maximum amount of premium is found 96.87%.

The ownership structure of QIP issuing firm is categorized into promoters' ownership and institutional ownership. The institutional ownership is further categorized into ownership by mutual funds, insurance companies, domestic financial institutional investors (DFI) and foreign institutional investors (FII) in the percentage. The investors who hold the ownership stake of 5% and above are considered as blockholders. The descriptive statistics of each ownership category is presented in table 2.

5.2 Methodology: Binary logistic regression analysis

To analyze the significance of ownership structure in obtaining the probability of price premium for the QIP issues, this study applied binary logistic regression method. A variant of least square regression technique, logistic regression is used when the dependent variable does not take continuous form and is categorical in nature. The study also performs OLS regression estimation by considering the percentage of premium as a dependent variable.

The focus of our study is to validate the monitoring hypothesis associated with the ownership structure and its significance in fetching the probability of price premium/discount for QIP issue. To identify the same, this study uses binary logistic regression methodology by considering a dependent variable as 1 for the issues that received premium which also means that the issue price is above the regulatory floor price and 0 for the firms that did not receive any premium and the issues are priced at same as the floor price.

Following equation presents the logistic regression model adopted to test the monitoring hypothesis

$$QIPpremium/NoPremium\ OR\ Premium/Discount = Constant + \beta_1 LnIssuesize + \beta_2 LnAge2 + \beta_3 GroupAffiliation + \beta_4 ROA + \beta_5 TobinQ + \beta_6 Promoter\ holding + \beta_n OwnershipVariables + error$$

The above mentioned logistic regression model is also considered by changing the dependent variable to the probability of obtaining premium or discount.

To identify the determinants of premium in percentage terms, we use following OLS regression model

$$QIP\ premium\ Percentage = Constant + \beta_1 LnIssuesize + \beta_2 LnAge2 + \beta_3 GroupAffiliation + \beta_4 ROA + \beta_5 TobinQ + \beta_6 Promoter\ holding + \beta_n OwnershipVariables + error$$

6. Results and Discussion

The objective of the study is to analyze the role of existing ownership structure in fetching the premium over and above the regulatory premium price. To analyze the effect of existing ownership structure we consider issue size, age, group affiliation, and performance measures such as ROA (accounting performance measure) and Tobin Q (market based performance measure), promoters' ownership stake as control variables. The performance measures are basically to avoid the bias of obtaining premium based on the firm performance.

Table 3 presents the results of logistic regression in identifying the factors influencing the probability of a QIP issue in fetching the premium price over and above regulatory price. The issues that are offered at premium take value of 1 and issues offered at floor price take value of zero. The ownership structure at time t same as QIP year is considered as independent variable.

In table 3, we add different variables of ownership structure in each model. The ownership structure is categorized into mutual funds, insurance companies, domestic financial institutional investors and foreign institutional investors. Model 1 is presented as base model which is referred to identify the determinants of QIP premium. In this model issue size and group affiliation of a firm is found significant in determining the probability of obtaining price premium. The issue size is positively significant with odds ratio of 1.7. It indicate that larger issues indicate increased probability of fetching premium. Increase in issue size by 1 unit increases the odds of getting premium by 1.7. Similarly the odds ratio for group affiliation is 2.46. Business group affiliation has significantly high probability of obtaining premium for QIP issues. In model 2 we consider ownership of mutual fund as a part of independent variable along with other control variables such as size, age, group affiliation, performance measures and promoters' holding. In this model we observe that the ownership

of mutual fund is not found significant in fetching the premium for QIP issues. In this case we can interpret that mutual funds are vigilant about their portfolio performance and are not willing to pay premium when they can change the portfolio based on the market price. The insignificance can also be explained based on regulatory allocation mandate where 10% of QIP has to be allotted to mutual fund. Hence the mutual fund investors will get the allocation irrespective of the price that they are willing to pay.

The empirical results in model 3 indicate that the ownership stake of insurance companies in a given QIP year is found insignificant. In model 4 and 5 we present the ownership by DFI and FII respectively which is also found insignificant. Model 6 is a complete comprehensive model where all the ownership variables under consideration are observed insignificant.

Table 3: Logistic regression to analyze the impact of ownership structure on the probability of obtaining QIP premium Dependent variable - Premium obtained /No premium

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	β (p)	Exp(β)	β (p)	Exp(β)	β (p)	Exp(β)	β (p)	Exp(β)	β (p)	Exp(β)	β (p)	Exp(β)
LnIssueSize	.53 (.02**)	1.70	.53 (.02**)	1.70	.51 (.03**)	1.67	.49 (.04**)	1.63	.51 (.03**)	1.67	.48 (.05**)	1.62
LnAge2	-.06 (.76)	.94	-.06 (.75)	.94	-.05 (.82)	.96	-.09 (.65)	.91	-.07 (.74)	.93	-.07 (.72)	.93
GroupAffiliation	.90 (.04**)	2.46	.90 (.04**)	2.46	.99 (.02**)	2.69	.96 (.03**)	2.61	.90 (.04**)	2.45	1.03 (.02**)	2.79
ROA_t	-.06 (.12)	.94	-.06 (.13)	.94	-.05 (.19)	.95	-.06 (.12)	.94	-.06 (.12)	.94	-.06 (.19)	.95
$TobinQ_t$	.00 (.78)	1.00	.00 (.79)	1.00	.00 (.75)	1.00	.00 (.74)	1.00	.00 (.77)	1.00	.00 (.73)	1.00
$PromoterHolding_t$	.00 (.90)	1.00	.00 (.89)	1.00	-.01 (.69)	.99	.00 (.78)	1.00	.00 (.99)	1.00	-.01 (.65)	.99
$MutualFund_t$			.00 (.93)	1.00							.00 (.96)	1.00
$Insurance_t$					-.07 (.29)	.93					-.06 (.41)	.94
DFI_t							-.10 (.20)	.91			-.09 (.27)	.92
FII_t									.00 (.77)	1.00	.00 (.95)	1.00
Constant	-3.13 (.08*)	.04	-3.12 (.08*)	.04	-2.84 (.11)	.06	-2.53 (.17)	.08	-3.18 (.08*)	.04	-2.34 (.22)	.10
Nagelkerke R^2	.12		.12		.13		.14		.12		.14	
N	147		147		147		147		147		147	

P value is presented in parenthesis. In columns, ***, **, and * indicate significance at 1%, 5% and 10% level, respectively.

The empirical results presented in table 3 indicate that the ownership structure including the ownership stake by institutional investors does not influence the probability of obtaining premium for QIP issue. However, this situation was valid up to 2012 where there was

possibility of obtaining premium only. Otherwise, the issue will be offered at regulatory floor price. If the QIP investors perceive that the existing institutional investors are leading to better governance through the monitoring act for which they would be willing to pay premium price. Since the ownership stake of all existing institutional investor is found insignificant, our study does not support our proposed hypothesis for the time period prior to 2012. In other words, the governance of a firm does not play significant role in influencing the probability of fetching premium for QIP issues. Therefore, our study results support the findings of Wu (2004) that institutional investors do not necessarily perform the monitoring activity to increase the firm value.

Table 4 presents OLS regression results in identifying the variables that influence the percentage of premium for QIP issue by considering the similar ownership variables as presented in table 3.

Table 4: OLS regression analysis to analyze the impact of ownership structure on the percentage of QIP premium

Dependent variable - Premium Percent

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	β	p	β	p	β	p	β	p	β	p	β	p
LnIssueSize	.06	.48	.06	.50	.06	.45	.05	.53	.06	.48	.07	.42
LnAge2	-.18	.03**	-.18	.03**	-.17	.05**	-.19	.03**	-.18	.03**	-.17	.05*
GroupAffiliation	.05	.58	.05	.57	.07	.39	.05	.54	.05	.57	.08	.34
ROA_t	.06	.48	.06	.52	.08	.34	.06	.50	.06	.48	.08	.36
$TobinQ_t$	.11	.23	.11	.22	.10	.27	.11	.22	.11	.23	.10	.27
$PromoterHolding_t$	-.07	.45	-.06	.48	-.10	.28	-.07	.42	-.07	.47	-.12	.25
$MutualFund_t$			.02	.76							.02	.80
$Insurance_t$					-.14	.09*					-.15	.08*
DFI_t							-.04	.59			-.03	.75
FII_t									-.01	.90	-.05	.60
Constant		.67		.71		.60		.59		.66		.55
Adjusted R^2	.02		.01		.03		.01		.01		.01	
N	167		167		167		167		167		167	

In columns, ***, **, and * indicate significance at 1%, 5% and 10% level, respectively.

The results presented in table 4 indicate that only ownership stake by insurance companies show weak significance (significant at 10%) in model 3 and 6. The negative beta coefficient indicates that higher ownership stake by insurance companies reduces the amount of premium. In other words the possibility of insurance companies investing in QIP at discount is likely to oberve.

In table 5, we present the logistic regression by considering the probability of obtaining premium or discount as a dependent variable. The issues that are offered at premium take value of 1 and if they are at discount it takes value of 0.

Table 5: Logistic regression analyzing the impact of ownership structure on probability of obtaining QIP premium or discount

Dependent variable – Premium /Discount

	Model 1 β (p)	Exp(β)	Model 2 β (p)	Exp(β)	Model 3 β (p)	Exp(β)	Model 4 β (p)	Exp(β)	Model 5 β (p)	Exp(β)	Model 6 β (p)	Exp (β)
LnIssueSize	-0.74 (.01***)	0.48	-0.84 (.00***)	0.43	-0.73 (.01***)	0.48	-0.75 (.00***)	0.47	-1.02 (.00***)	0.36	-1.00 (.00***)	0.37
LnAge2	-0.44 (0.13)	0.64	-0.51 (.09*)	0.60	-0.43 (0.15)	0.65	-0.46 (0.12)	0.63	-0.37 (0.21)	0.69	-0.47 (0.13)	0.63
GroupAffiliation	1.26 (.03**)	3.52	1.27 (.03**)	3.56	1.34 (.03**)	3.80	1.37 (.02**)	3.93	1.24 (.03**)	3.46	1.36 (.03**)	3.91
ROA_t	0.01 (0.80)	1.01	0.03 (0.55)	1.04	0.02 (0.74)	1.02	0.01 (0.88)	1.01	0.01 (0.88)	1.01	0.03 (0.64)	1.03
$TobinQ_t$	0.00 (0.66)	1.00	0.00 (0.44)	1.00	0.00 (0.60)	1.00	0.00 (0.68)	1.00	0.00 (0.59)	1.00	0.00 (0.44)	1.00
$PromoterHolding_t$	0.00 (0.82)	1.00	-0.01 (0.67)	0.99	-0.01 (0.78)	0.99	-0.01 (0.75)	0.99	0.02 (0.37)	1.02	0.01 (0.79)	1.01
$MutualFund_t$			-0.09 (.03**)	0.92							-0.07 (0.12)	0.93
$Insurance_t$					-0.06 (0.57)	0.95					0.01 (0.93)	1.01
DFI_t							-0.12 (0.35)	0.88			-0.09 (0.52)	0.91
FII_t									0.06 (.08*)	1.06	0.03 (0.34)	1.04
Time Dummy	YES		YES		YES		YES		YES		YES	
Constant	8.16 (.00***)		10.07 (.00***)		8.16 (.00***)		8.51 (.00***)		8.02 (.00***)		9.84 (.00***)	
Nagelkerke R^2	0.19		0.24		0.19		0.20		0.23		0.26	
N	120		120		120		120		120		120	

P value is presented in parenthesis. In columns, ***, **, and * indicate significance at 1%, 5% and 10% level, respectively.

In table 5, model 1 indicates that the issue size and group affiliation are observed significantly influencing the probability of obtaining premium. The issue size indicates negative relationship where larger issues are more likely to observe at discount. One unit increase will decrease the odds of getting premium by 0.48. Group affiliated firm are have

higher probability of obtaining premium. The positive influence of group affiliation is likely to be linked with certification effect of business group. Model 2 shows that the participation of mutual fund investors is observed significant at 5% level. The significance is associated with negative beta coefficient indicating that increase in ownership of mutual fund results in reducing the probability of obtaining premium. The odds ratio associated with it is 0.92 indicating that if the ownership of mutual fund is increased by 1%, the odds of getting premium is decreased by 0.92. This supports the regulatory mandate where 10% of QIP issue has to be allotted to the mutual fund. Due to this mandatory requirement, the mutual fund investors are confident about the allocation even at discounted price and need not offer premium price. This justifies the significant negative relationship of mutual fund ownership linked to regulatory requirement.

In model 3 and 4, we add ownership by insurance companies and DFI respectively. Both classes of investors do not significantly influence the probability of obtaining premium. In model 5, the FII investors support weakly positive significance in determining the probability of obtaining premium. The odds ratio indicates that if the ownership of FII is increased by 1%, the odds of getting premium increased by 1.06. Based on these results if we consider the QIP issues with holistic approach, our proposed hypothesis is partially supported where we find that the mutual fund investors and FII investors influence the probability of obtaining premium whereas the insurance companies influence the magnitude of (absolute amount) premium

7. Summary and Conclusion

The review of prior literature linking the ownership structure and firm performance has resulted in inconclusive results. There are some of the quantification biases in terms of accounting based performance measure and market based performance measure. The relationship is significantly influenced due to governance efficiency or degree of information asymmetry between the investors in the capital market. The inconclusive results are due to difficulty in isolating the effect of each other. QIP in Indian market by their regulatory framework entails no information asymmetry and allows purely to test the influence of ownership structure on the prices of equity issue offered through QIP route.

Since the structure of QIP issuance norms exhibit the dichotomy of these parameters and isolate them to empirically analyzed the influence of ownership structure on the QIP price.

The change in the regulatory norms gives the structure break in generalizing the results. The QIP issues had only possibility to obtain price premium over and above regulatory prescribed price prior to 2012. Consequently, we argue that the probability of obtaining price premium is influenced only due to perceived increase in governance efficiency through its existing ownership structure. The existing ownership especially informed investors (institutional) may have greater role in increasing the firm performance through their monitoring activity. However our empirical results indicate that the existing ownership structure does not play any significant role in influencing the probability of obtaining premium for QIP issues.

The change in the regulatory norm allows to test the influence of ownership structure on the percentage of premium and probability of obtaining premium compared with the discount. In these cases we find that insurance companies negatively influence the amount of premium obtained however, the significance is weak. However, when we analyze the probability of obtaining premium over discount, we find that mutual funds and foreign institutional investors are found significant where the justification is routed through regulatory mandates related to the allocation to mutual fund. As a result, the monitoring hypothesis is partially supported due to the change in the regulatory mechanism.

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