

More than a Fair Share: Principal-Principal Conflicts in Emerging Markets

Abstract

The concentrated ownership structure of emerging market firms may help mitigate principal-agent conflicts; however, the presence of two sets of principals, promoters with controlling stake and dispersed shareholders, may give rise to principal-principal conflicts. India, where firms are largely organized as business groups, with stock pyramids and complex cross-ownership structures, presents a distinctive venue to study the presence of such conflicts. This paper tests if the principal-principal conflicts transpire in the form of risk aversion when Indian bidders, with promoter-managers, seek to merge or acquire. We find evidence suggesting risk-reduction and increased diversification when promoters have high cash-flow rights in an acquiring firm. Since a promoter-manager is less likely to face employment risk, we argue that in business group firms this possibly happens due to ‘tunnelling distortion’, whereas in standalone firms, this may occur due to ‘portfolio concentration’.

Keywords: Principal-principal conflicts, agency theory, India, M&A, ownership concentration, promoter-manager, risk-taking behaviour.

JEL Classification Codes: G34, G32

1. Introduction

The classic agency theory that stems from the disharmony of interests and goals of principals and agents (Jensen & Meckling, 1976) is well suited to address corporate governance concerns in the countries where the stock-ownership is dispersed. However, business settings where the high concentration of ownership is predominant, call for addressing governance issues through the lens of principal-principal conflicts (Young et al., 2008).

In emerging markets, factors like concentrated and complex ownership structures, weak shareholder protection and institutional voids give rise to conflicts between the majority and minority shareholders (Young et al., 2008). A large number of Indian businesses are organized as business groups as a consequence of India's business history and the institutional voids¹ that are generally observed in the emerging markets (Khanna & Palepu, 2000b). Most of these business groups are family owned with high promoter holdings, as a classic feature of their ownership structure (Huchet & Ruet, 2006).

In Indian firms, promoters have high ownership stakes, and also control the management of the firm (we label them promoter-managers). Furthermore, the pyramidal-stock ownership structure² enables promoters to have greater control compared to their cash flow rights in a lower level business group firm as well (Khanna and Palepu, 2000). As a consequence of this phenomenon, two sets of shareholders emerge. One set of shareholders are the promoter-managers, whereas, the other set of shareholders have a substantial yet minority stake in the firm, but are widely dispersed to have much say in management's decisions. In such a setting, there is a greater possibility for the promoter-managers to ignore the interests of the minority shareholders, which may give rise to principal-principals conflicts (Dharwadkar et al., 2000, Morck et al., 2005).

The agency literature assumes that managers are opportunistic; and there is extant empirical evidence that suggests that the managers have a tendency to make suboptimal risk choices (entrenchment hypothesis and the perquisite consumption argument). A widely acknowledged reason for this behavior is the non-diversifiable employment risk faced by a manager (Amihud

¹ The term 'institutional voids' was coined by Prof. Tarun Khanna and Prof. Krishna Palepu (1999).

² Pyramidal structure enables greater control in the hands of the insiders, over and above their cash flow rights (Porta et al., 1998, Khanna and Palepu, 2000).

and Lev, 1981). Besides, making risky investments can limit a manager's rent seeking ability since it requires more prudent use of the firm's resources (Jensen 1986, 1993). Such managerial opportunism is addressed by effective incentive design and compensation structure that includes equity and option holdings (the incentive alignment hypothesis). This approach is based on the premise that high equity ownership of managers can help mitigate the risk-avoidance resorted to, by them. Now, since, most of the Indian firms already have promoter-managers, that is, managers with high equity stakes, we believe it would be interesting to study if their risk-related behaviour favours all the shareholders including the dispersed shareholders, when they make external corporate investment decisions, or they resort to risk aversion in the same fashion as their western counterparts.

In this paper, we test if the principal-principal conflicts transpire in the form of risk aversion when Indian bidders seek to merge or acquire. On one hand, there is a likelihood of tunnelling in business groups (Bertrand et al., 2002, Khanna & Rivkin, 2001), that is, the expropriation of wealth from minority shareholders and channelling them to the group affiliated underperforming firms (Shleifer & Vishny, 1997); whereas, contrary to this, there is empirical evidence in favour of family businesses that suggests that such firms do not destroy value on making acquisitions (Caprio et al., 2010).

Our empirical study sample comprises family owned business group firms and stand-alone firms. We observe that when Indian bidders make M&A announcements, the investors react positively. However, on assessing the risk-taking behaviour of these bidders, we observe that Indian bidders are undertaking value enhancing risky deals as long as they do not hold majority stake (i.e., more than 50 per cent shares). The Indian bidders resort to risk-aversion when promoters hold majority stake, that is, when their cash-flow rights in a firm are more than fifty per cent. We argue that in business group firms this happens due to 'tunnelling distortion' whereas in standalone firms, this occurs due to 'portfolio concentration'.

Thus, in our opinion, undertaking this study has helped us understand the risk-taking behaviour of these firms across different ownership structures, and more importantly has helped us gather empirical evidence related to principal-principal conflicts arising due to the aforementioned ownership structures.

The paper is organized as follows: the next section presents the literature review and research questions; the third section presents the methodology; the fourth section presents the data and the sample selection; the fifth section presents the results and a brief discussion, and the sixth section presents our concluding remarks.

2. Literature Review and Research Questions

For our study, we have borrowed heavily from the literature on managerial opportunism, which addresses the concerns of the traditional agency problem observed in developed countries with dispersed ownership. But, we attempt to extend the new branch of agency theory literature which considers the conflict of interest between the majority and the minority shareholders (Dharwadkar et al., 2000), and is more relevant in the context of the emerging economies where high ownership concentration among the promoters is a classic feature of firm ownership (Young et al., 2008). In this study, we test the presence of principal-principal conflicts in India by employing the established empirical approaches used to study the traditional agency problems in developed countries, and hence we review this literature at length. A similar, yet different, study is undertaken by Chen & Young (2010), who have found empirical evidence supporting the principal-principal agency concerns in Chinese state owned enterprises.

Amihud & Lev (1981) have considered the impact of managerial ownership on the firm diversification activity and propose the ‘employment risk’ argument to explain the managers’ risk-averse behaviour. Since, a manager’s income is dependent on firm’s performance, and she bears the non-diversifiable risk of losing her job, she is induced to reduce this risk by entering into conglomerate mergers. We juxtapose the above argument with Fama’s (1980), who implies that if executives don’t behave in favour of the shareholders then the market would discipline them by adverse revision of their human capital worth.

Literature on managerial opportunism offers several behavioural explanations like the ‘empire building’ motivation (Jensen, 1986, 1993) and the ‘hubris’ hypothesis (Roll, 1986), which also help us understand why managers’ act against their shareholders by making value-destroying decisions. Managers driven by empire building motivations like to have greater control over the firm’s resources to derive larger private benefits, whereas, managers guided by their overconfidence (hubris) tend to make valuation mistakes.

The empirical literature in this area primarily explores the relationship between equity ownership, including stock option grants and other components of executive compensation, and managerial opportunistic behaviour (including entrenchment). Empirical studies by Lloyd et al. (1987), Morck et al. (1990) and Saunders et al. (1990) support Amihud & Lev's (1981) conclusions. They observe that manager-controlled firms are more prone to diversifying their income streams, which implies risk-averse behaviour on the part of the managers. But Lane et al. (1998) present contradictory evidence advocating that managers do not always exhibit risk aversion. In fact, they propose stewardship theory in support of managers' behaviour with respect to mergers and acquisitions. Similarly, Rose & Shepard (1997) show that due to the challenges and demands of the job that the CEOs of diversified firms are able to fetch greater salaries and bonuses than their counterparts in non-diversified firms, and not due to the entrenchment reasons. However, a more recent study by Shekhar & Torbey (2005) found evidence hinting managerial-opportunism in Australian M&A. They found that increased equity ownership leads to greater diversification; nevertheless, such diversification deals are not value destroying.

A strand of empirical literature on managerial opportunism explores the relationship between equity ownership and firm value. McConnell & Servaes (1990) observe a non-linear link between equity ownership by corporate insiders and firm value, with inflection point at the 40-50 per cent ownership level. A similar positive link is observed in Frye (2001), but Sesil et al. (2000) conclude such link only in favour of stock options.

Another strand of literature uses M&A deal announcement abnormal returns as a tool to investigate managerial opportunism. Lewellen et al. (1985) report higher abnormal returns on merger announcements for firms with higher insider (managerial) ownership, thus, implying that agency conflicts are reduced by increasing management's equity ownership. Cornett et al. (2003) observe the negative investor reaction around diversification deal announcements by acquiring banks, thus, implying that agency concerns are not completely addressed through corporate governance mechanisms like equity & option holdings; however, Minnick et al (2010) observe contradictory results for small & medium sized banks. Harford & Li (2007) also reject the incentive alignment hypothesis, and show that executive compensation increases after an acquisition, even though the deal is value-destroying for shareholders. Walters et al. (2007) show

that the greater levels of CEO tenure in the absence of vigilant board leads to value destroying acquisitions.

A considerable thread of literature on managerial opportunism investigates the risk taking behaviour of insiders (i.e. managers) given their equity ownership and/or compensation structure. Agrawal & Mandelker (1987) observe a positive relationship between the extent of stock & options held by the managers & their risk taking behaviour, but Lewellen et al. (1989) find very weak evidence in support of this view. Hanson & Song (1996) also conclude that the direct relationship between stock ownership of managers and their risk taking behaviour cannot be found in case of firms with dual class shares, since there is a disparity in the equity holdings and control vested due to such holdings.

Although ESOPs are viewed as an effective instrument to align interests of the principals and agents, yet in a study by Gamble (2000) it is observed that since ESOPs are held by incumbent management or employees who are controlled by such management, the increase in the block of ESOPs makes management further entrenched. They find that with the increase in ESOP concentration, management's commitment to innovation has gone down due to their risk-averse behaviour.

Wright et al. (2002) provide evidence contrary to Gamble's (2000). They show that to certain extent insider ownership helps curb the agency conflicts, but beyond a level, greater equity ownership may cause managers to exhibit risk aversion, though stock options could help align a manager's motives with firms'. So as per Wright et al (2002) a CEO's stock ownership has non-linear relationship with his risk taking, while his stock option holdings are linearly related to his risk taking. Interestingly, Sanders (2001) finds that incentive effects of stock ownership & option pay are exactly opposite. They find that executive stock ownership induces risk-averse behaviour among managers, whereas the stock option pay induces greater risk seeking behaviour among them. Williams & Rao (2006) study show that stock options have positive impact on manager's risk taking; however, this linkage is affected by the size factor. Williams et al. (2008) show that even in the banking industry, the stock options induce managers to take greater risk as shown by the post-merger increase in return volatility.

The aforementioned discussion suggests that the literature in this area has evolved over the years but the final word is yet to be said. There are conflicting evidences with regards to equity and option ownership by the insiders / managers/ executives and its impact on firm's long term growth strategies like acquisitions (related or unrelated) and idiosyncratic risk. Moreover, over time the authors have considered different components of executive compensation, board structure, presence of block holders and other corporate governance mechanisms to study the dynamics of managerial risk taking.

High promoter ownership in Indian companies makes it a classic case to study the above inter-linkages from the perspective of principal-principal agency. In the light of the above discussion, we undertake this study to test if we observe managerial opportunism in the form of principal-principal agency in Indian companies when they make external corporate investment decisions. Firstly, we address this inquiry by observing the impact of promoter ownership concentration on shareholder wealth around M&A deal announcements. Our objective is to capture investors' reaction to M&A deals announced by firms with high ownership concentration. Secondly, we analyse the impact of high ownership concentration on the risk-taking behaviour of its management, i.e., we test if M&A deals by highly concentrated bidders lead to decrease in post-deal risk (idiosyncratic). Lastly, we study the acquisitiveness (M&A activity) of highly concentrated bidders. Our objective is to test the impact of promoter holdings on their M&A activity. M&A activity is another proxy for risk, and it mirrors the idiosyncratic risk proxy.

3. Methodology

3.1 Event Study

To analyse the effect of bidder ownership structure on shareholder wealth, we observe the shareholder reactions on deal announcements (Lewellen, 1989; Morck et al., 1990; Chen & Young, 2010). We calculate CAR, i.e., cumulative abnormal returns for each bidder around a deal announcement by employing the standard event study methodology (Brown & Warner, 1985; MacKinlay, 1997; Kothari & Warner, 2007).

To study the announcement effects of M&A deals by promoter-managers on the bidder stock returns, we use the standard market model (model 1) to calculate the expected returns,

subsequent to which we calculate abnormal returns (model 2) and cumulative abnormal returns (model 3) abbreviated as AR and CAR, respectively.

$$E(R_{it}) = \alpha + \beta R_{mt} \quad (1)$$

$$AR_{it} = R_{it} - E(R_{it}) \quad (2)$$

$$CAR_i^T = \sum_{t=t_1}^{t_2} AR_{it} \quad (3)$$

Where $E(R_{it})$ is the expected return of a bidding firm for an event i , R_{mt} is the return on market portfolio for day t and R_{it} is the actual return of the bidder for the event i . AR_{it} is the abnormal return for the event i on the day t ; it is the difference between the actual returns and the estimated returns from our market model. The above abnormal returns are calculated assuming that investors frequently rebalance their portfolios.

The length of the estimation period for the model 1 is 200 days, prior to the $t-7$ day (t – is the event day), that is, the estimation period is $t-207$ to $t-8$ day. This period of 200 days is a sufficiently long period for the estimation of model coefficients as suggested in the event study methodology papers (Brown & Warner, 1985, MacKinlay, 1997, Kothari & Warner, 2007).

The variable CAR_i^T is the cumulative return for an event window T . We have calculated the cumulative abnormal returns for different event windows, that is, different combinations of days before and after a deal announcement. For example, $CAR_i(-1,+1)$ is a cumulative abnormal return over three days, from one day prior to one day post the deal announcement. In this part, we test the null hypothesis that the mean CAR is significantly not different from zero.

3.2 Cross Sectional Regression on Bidder Returns

The average promoter-holdings of companies in India's leading equity index, Nifty, stood close to 54 per cent in December 2007, and 48 per cent in June 2011 (Sivam, 2011). We observe that promoter holdings in S&P CNX 500 companies have been perennially high, often above 50 per cent (ref. Graph I). In fact, SEBI, the Indian securities market regulator, has issued a mandate in 2010 to all the listed companies to reduce their promoter holdings below 75 per cent, and to increase their public shareholding up to at least 25 per cent. Our event study sample suggests that

the average promoter holdings in a firm were more than 48 per cent (see Table IA). This phenomenon motivates us to hypothesize that promoter ownership could have significant power in explaining the wealth-effects. Therefore, we employ a cross sectional ordinary least square regression analysis, with white robust standard errors, to study the effects of ownership structure and event specific factors on the abnormal returns around M&A deal announcements. Our cross sectional OLS regression model is:

$$CAR_i^T = \alpha + \beta_1 Prom\ Hold_i + \beta_2 Fin_i + \beta_3 Rel_i + \beta_4 Percent\ Acq26_i + \beta_5 Rel\ Size_i + \beta_6 Sqrt\ DE_i + \beta_7 Debt\ Cost\ Dummy_i + \beta_8 Sales\ Growth\ 5\ years_i + \beta_9 Industry\ Controls_i + \beta_{10} Recession\ Yr.\ Dummy_i + e_i \quad (4)$$

where CAR_i^T is the cumulative abnormal return for observation i calculated over the event window T; CAR_i^T is the same as $CAR(t_1, t_2)$, where period t_1 to t_2 are represented by an event window T. $Prom\ Hold_i$ is the percentage of promoter holdings for the observation i. FIN_i is the method of financing for an observation i, defined as a binary variable, assuming value 1 if it is a stock offer, 0 if it is a cash offer.

Rel_i is the industry relatedness dummy variable for observation i, assuming value 0 if a bidding firm and the target are in the same industry, 1 otherwise. For determining whether a merger is happening in the same industry we have considered the SIC codes (up to the third digit), i.e., if the acquirer and the target have a same SIC up to the first 3 digits, then we identify that deal as a related industry deal.

We test the size hypothesis, using relative size (the ratio of transaction value and the bidding firm's market value). Large deals often receive greater attention from the media, and hence are generally termed as the glamour deals. We also test for the effect of the percentage of stake acquired, with the help of a dummy variable for the deals in which a bidder acquires more than twenty-six per cent stake. $Percent\ Acq26_i$ is a dummy variable based on the percentage of stake acquired in a deal for a given observation i. It assumes value 1 if the per cent acquired exceeds 26 per cent, otherwise it takes value zero. $Rel\ Size_i$ is the relative size of the transaction for the observation i, measured as the ratio of the value of a transaction over the market value of its acquirer.

We test the impact of leverage on shareholder wealth by the leverage ratio, that is, the debt equity ratio. The proxy that we use here, $Sqrt DE_i$, is the square root of the debt equity ratio. The square relationship depicts that if the abnormal returns have a direct relationship with leverage then the returns would grow with an increase in the given variable, but at a slower rate. $Percent Acq26_i$ is a dummy variable based on the percentage of stake acquired in a deal for a given observation i . It assumes value 1 if the per cent acquired exceeds 26 per cent, otherwise it takes value zero. $Rel Size_i$ is the relative size of the transaction for the observation i , measured as the ratio of the value of a transaction over the market value of its acquirer. $Sqrt DE_i$ is the square root of the acquirer's debt-equity ratio for the observation i .

$Debt Cost Dummy_i$ is a dummy variable, which assumes the value 1 if the acquirer's cost of debt for the observation i , before the deal announcement, is more than the median cost of debt, 0 otherwise. The cost of debt is measured as the ratio of interest expense and the average borrowings in the quarter before the deal announcement. $Sales Growth 5 years_i$ is the compound annual growth rate of sales of an acquirer for five years prior to the acquisition.

$Industry Controls_i$ are the dummy variables for different industries, assuming value 1 if a particular acquirer belongs to that industry, 0 otherwise. $Recession Yr. Dummy_i$ is a dummy variable to identify recession years (2007, 2008 and 2009).

3.3 Risk Taking Behaviour of the Bidders: Tobit Regression

To study the promoter-managers' risk taking behaviour, we consider the ratio of post-deal risk over the pre-deal risk (Lewellen et al., 1989, Williams & Rao, 2006). In this study, we consider variability in bidder's stock returns as one of the measures of risk. We employ two different measures of risk, a. raw standard deviation of stock returns, and b. market adjusted standard deviation of stock returns. The first measure is the overall variability in stock returns, whereas the second measure, that is, the residual standard deviation of returns (market adjusted standard deviation of returns), represents an estimate of the firm's unsystematic risk. Lewellen et al. (1989) and Williams and Rao (2006) have employed these measures of risk to study the impact of management's stock ownership and options holdings on firm risk.

Since our dependent variable is the standard deviation of security returns (absolute and market-adjusted), the value of this measure cannot go below zero, that is, the response variable is bounded on the lower side. Hence, based on the characteristic of our dependent variable, the model that we test is a corner-solution model, and the use of the ordinary least square regression would not be appropriate, since it can give us negative predictions. Thus, we employ tobit regression analysis, which is a hybrid of the OLS regression and the probit regression analysis.³

$$Post - deal Risk over Pre - deal Risk_i = \alpha + \beta_1 Insider Own_i + \beta_2 Insider Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i \text{ (eg. Log Deal Size, Acq_Percent, DE, BG, Post_1991, industry effects, year effects.)} \quad (5)$$

For the pre-deal period risk calculation, we calculate the risk variables over a period of 180 days starting 30 days before a deal, and for the post-deal risk calculation, we measure risk variables over a 180 day period starting 11 days after the completion of a deal (Williams and Rao, 2006).

Insider Own_i is the proxy for promoter holdings. Since the objective of this study is to capture the presence of principal-principal conflicts between promoter-manager and dispersed shareholders, we take percentage of stock held by promoters. In the tobit regression model stated above we have tested for two proxies of insider owners in our analysis on the idiosyncratic risk, and six proxies of the same variable in our analysis on M&A Activity (ref. Appendix I for the definition of proxies used). We have also employed a squared variable of each of the insider ownership proxies, because this variable has a curvilinear relationship with the risk measure. This curvilinear relationship is suitably captured by introducing a squared term of the insider ownership measure.

3.4 Risk Taking Behaviour of the Bidders: Negative Binomial Regression

We also employ another model to test the risk taking behaviour of insider owners. In this model, we employ the number of M&A deals, termed as M&A activity (overall, and diversification only deals), by bidders in ten years prior to a given deal announcement as the dependent variable.

³ For more details on this statistical method please refer: Soderbom, Mans and Teal, Francis. 2008. "Corner solutions, Censoring and Truncation." Available on: http://www.economics.ox.ac.uk/Intra/Grad/MSc/2007-08/QuantMethods/Lecture%20Notes_FJT/HT_Lectures_handouts/lec3ht_08_censoring.pdf. Accessed on 17th October, 2012.

Amihud and Lev (1981) have looked at M&A activity of bidders to assess the managerial motive for conglomerate mergers. Thus, borrowing from their paper, we have used M&A activity, that is, the number of M&A deals by a bidder in ten years prior to a given deal, as another proxy for risk. We have also considered M&A deals by a bidder only in unrelated industries. Increased M&A deals suggest risk-reduction behaviour on part of the manager, and vice versa. To capture this measure we have excluded those deals where only assets were acquired. We have also excluded the deals where the percentage of stake acquired was less than ten.

The response variable in this model is a count variable, and hence we employ negative binomial regression analysis to estimate the following models:

$$M\&A\ Activity_i(\text{total activity}) = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i \text{ (eg. Log Assets, DE, Post}_{1991}, \text{ industry effects, year effects.)} \quad (6)$$

$$M\&A\ Activity_i(\text{in unrelated ind.}) = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i \text{ (eg. Log Assets, DE, Post}_{1991}, \text{ industry effects, year effects.)} \quad (7)$$

The dependent variable in the above models is the mirror image of the risk proxy used in the model no. 5. In the above models, the increase in the dependent variable would suggest risk aversion for the reasons discussed in the earlier section, whereas, an increase in the dependent variable of model 5, would suggest greater risk taking. We have kept all the independent variables in the model 5, 6 and 7 as the same; however, we have deleted some of the control variables not relevant for M&A activity models (model no. 6 and 7). We employ different proxies to capture promoter holdings. We include holdings of other shareholders like persons acting in concert as promoters, and domestic and foreign institutional investors, in some proxies. We list out the different proxies and their components in Appendix I.

3.5 Independent and Control Variables

3.5.1 Industry Relatedness

Corporate diversification is the diversification of the firm specific risk (the idiosyncratic or the unsystematic risk). As per modern portfolio theory, the unsystematic risk can be managed by the way of diversification and hence should not reflect in the investor's valuation of a firm, however,

corporate strategy research differs on this conclusion. In the words of Bettis (1983), '*Modern financial theory suggests that the equity markets will not reward unsystematic risk management, but unsystematic risk management lies at the heart of strategic management*'. Thus, Bettis (1983) has put forward an important conundrum faced by academic researchers in the area of modern financial theory and corporate strategy. The empirical research in these fields is yet to agree on a common conclusion, since some research supports the diversification discount hypothesis (Rajan et al., 2000, Laeven & Levine, 2007), whereas other body of work suggests that diversification creates value (Villalonga, 2004; ref. Martin & Sayrak, 2003, for a detailed review of the literature on this issue).

We employ a dummy variable on industry relatedness to separate diversification deals from the deals in the related industries. The diversification research has presented different ways of identifying related and unrelated deals; the most common approach is the use of SIC codes. Researchers have looked at the first two, the first three or the first four digits of the SIC to identify a diversification deal. We did employ this technique of identifying the diversification deals by considering the first three digits of the SIC, but found the industry sector segregation as provided Fama-French was a more reliable indicator of the relatedness of a deal. Thus, based on the Fama-French forty-nine industry classification, if the deals are in different industries, then the dummy value of relatedness for the risk analysis part (tobit regressions) is one.

3.5.2 Age Group

The firms in our sample are segregated based on the period in which they were incorporated. CMIE's Prowess Database reports five age groups, i.e., a. before 1950, b. between 1951 and 1971, c. between 1972 and 1985, d. between 1986 and 1990, and e. after 1991. Each group represents a different economic environment with respect to industrial licensing, stringency of controls over growth in size, economic reforms, etc⁴. Academic research has shown that younger firms are greater risk-takers than the older firms (Fink et al., 2004). Thus, we have considered the 'after-1991' age group category provided by prowess as an independent variable to identify younger firms.

⁴ Source: Prowess, CMIE. <http://prowess.cmie.com/>, accessed on 17th October, 2012.

3.5.3 Other Controls

Leverage: We have used debt-equity ratio as one of the control variables, since it is an important determinant of stock return volatility (Guay, 1991). Increase in leverage leads to increase in risk. We have used the square root of the debt-equity ratio of the acquirer, since this transformation helps us make the variable more normally distributed.

BG: Business Group (BG) affiliation is a significant factor unique to emerging economies, and we hope to capture the effect of this factor on the risk taking behaviour of its affiliates. Hence, we employ a dummy variable to identify the business group affiliated firms in our model.

Industry Controls: We have used control variables to isolate industry effects on the risk-taking behaviour of bidders. We have controlled for three relevant industries, namely, a. Construction material, building/construction and engineering, b. IT consulting and services, and software, and c. oil and gas, petrochemicals, power and other energy and power.

Year Effects: We have controlled for 2008 and 2009, because after 2007 there was a sharp drop in M&A activity in India due to the global economic downturn.

4. Data

Our data set comprises mergers and acquisition deals by Indian acquirers from 2001 to 2010. The data on mergers and acquisition deals in India and also the stock price data (for the event study) are taken from Thomson Reuters' Thomson One database. We have taken bidder's company financial information from the CMIE's⁵ Prowess database.

For our study, we have considered deals done by Indian acquirers; so, these deals are domestic and cross border as well. We have filtered only the completed deals; hence the deals those were announced but were terminated, are out of the purview of our study.

We exclude the following types of deals: the acquisition of assets, buybacks, bankruptcy acquisitions, and divestiture. We also exclude those deals where acquirer is an investor group,

⁵ CMIE is Centre for Monitoring Indian Economy. It provides company financial performance data for Indian companies through the Prowess Database.

deals where the value of the transaction is undisclosed or unavailable, deals by private firms and government owned enterprises. The date considered for event study is the first date of a deal announcement. We have excluded the deals with confounding corporate acquisitions, i.e., other acquisitions or merger announcements made or deals completed within the estimation period of any of the risk or return variables.

There are deals that are announced in parts, i.e., the deals where the acquirer and the target is same, but the deal value and other deal characteristics differ. In such cases of multiple announcements, we have included the deal with the highest percentage acquired. The date considered for event study, the return and the risk calculation, is the first date of a deal announcement.

We have not applied any filtering criteria on the deal value, but for the risk analysis part, we have filtered out the deals where the percentage acquired is less than ten. We have applied different controls for deal size and the ownership percentage acquired in our regression models. However, to be included in our data set, a deal must have all the required data with respect to closing stock prices and other financial variables used in the study. The absence of data on any relevant variable disqualifies the deal from being included in the dataset.

5. Results and Discussion

5.1 Bidder Returns on M&A Announcements and the Promoter Holdings

We have presented a summary of significant cumulative abnormal returns (CARs) in Table III, classified as per the promoter holdings. When we segregate the bidder abnormal returns in three categories of promoter holdings, we observe significant positive abnormal returns in different event windows for those bidders who have promoter holdings above 26 per cent (ref. Table III). Twenty-six per cent holding acts as an important cut-off since a shareholder can block special resolutions with shareholdings in excess of twenty-five per cent (as per Companies Act, 1956). Thus, for promoter holdings of twenty-six per cent or more, the deal announcement abnormal returns are persistently positive across different event windows.

The results on the regression analysis done on 216 M&A deals are presented in table IV. Promoter holdings show a positive relation with the abnormal returns, that is, when the promoter

holdings in a bidding company are high we expect positive abnormal returns and vice-versa. This result suggests that higher promoter holdings in a bidder company are not received negatively by the stock market.

Method of payment, represented as FIN, a dummy variable, (0 for cash payment and 1 for stock), is a significant explanatory variable influencing the cumulative abnormal return. The sign of the co-efficient of this variable suggests that when a stock deal is announced, the returns would be negative or lower as compared to when a cash deal is announced. This result is in agreement with the predictions of the signalling theory (i.e., the informational asymmetry theory) (Travlos, 1987, Trifts, 1991, Wansley et al., 1987).

Industry relatedness (Swieringa and Schauten (2007), Faccio Masulis (2005)) represented by the diversification dummy (i.e., Rel) fails to have any power in influencing the abnormal returns around deal announcements. If the deals are one where acquirer buys a substantial stake, more than twenty-six per cent, such deals are received positively by the stock market. Similarly, deals, where the relative deal size is high, are received positively, too, by the stock market.

Debt-equity ratio also displays a positive relationship with cumulative abnormal returns, suggesting that an increase in leverage would lead to higher abnormal returns. This result is consistent with Bruner (1988). Since acquisitions that are financed with debt perform better than the ones financed by internal funds (Martynova & Renneboog, 2009), we observe positive reaction to higher debt-equity ratio. The Debt equity ratio in the model is in the square root form, which suggests that the abnormal returns would increase with an increase in debt-equity, but the increase would be less and less steep.

The cost of debt dummy is inversely related with the cumulative abnormal returns. Investors do welcome some debt on the balance sheet, as discussed above, but when the cost of debt goes beyond the median rate, it has an adverse impact on the announcement returns.

The result that is the focus of this section is the positive relationship between insider ownership and abnormal returns, which suggests that high promoter holdings in a bidder company are not received negatively by the stock market. Companies with high ownership concentration in the hands of promoters could be regarded as better managed companies since the objectives of the

owners and the managers are aligned better in such companies. Thus, as per our regression results, investors do not perceive the deals to be value destroying if the ownership concentration in a bidding firm is high. This result, finds support in empirical studies of Lewellen (1985), Agrawal and Mandelkar (1987), Wright et al. (2002) and Shekhar and Torbey (2005). In their seminal work, Jensen and Meckling (1976) have argued that equity ownership of managers reduces the agency conflicts, and our results are consistent with this view; but, we cannot reject the possibility of the insider owner opportunism simply based on this result. Hence, in order to take a more rigorous view on the managerial opportunism (insider-owner opportunism in the context of principal-principal conflicts) we have investigated the risk taking behaviour of the promoter-managers in the next section.

5.2 Risk Taking Behaviour of the Bidders

In Table IC, we have presented a summary of total deals undertaken by Indian acquirers classified as per insider-ownership bucket they belong to. This table suggests that M&A activity (all deals, and only un-related industry deals) is high at lower insider ownership levels, but decreases when the ownership of promoters is more than 25 per cent. The managers of firms with lower ownership concentration resort to risk aversion by undertaking greater diversification. We observe that the average M&A activity (unrelated and total) is the lowest for the firms with promoter ownership between 25 to 50 per cent. This observation suggests that the classic agency problem, the principal-agent problem is mitigated by increasing insider ownership. However, when this insider ownership is more than 50 per cent, there is an increase in M&A activity, implying the presence of principal-principal conflict. We substantiate this claim by undertaking the tobit regression and negative binomial regression analysis.

5.2.1 Tobit regression analysis, and Negative Binomial Regression analysis

To understand the risk taking behaviour of bidding firms, we study the changes to firm risk after an acquisition or a merger deal, and if these changes are related to the ownership structure of the bidder. We also look at the past deal activity levels (M&A activity -total and in unrelated industries) by bidders as another proxy for the risk-taking. Thus, we undertake an inquiry into the second and the third research agenda related to the risk-taking behaviour of insider owners

which would help us make more informed conclusions on the principal-principal dynamics at play in Indian companies.

As discussed in the methodology section, we have employed different proxies of insider ownership and have also considered the squared term of each of the proxies to capture the curvilinear relationship between the risk measure and insider ownership. The market-adjusted measure of risk is a better measure for our regression analysis as compared to the raw measure since the same reflects the firm specific risk, and excludes the market wide risk.

The models III and IV (in Table V) report results using the overall standard deviation of stock returns as the response variable, whereas, the model I and II report the results with the market-adjusted standard deviation of returns as the response variable. Table VI A and B reports results on the overall M&A activity and the activity in unrelated industries, respectively; different columns represent models using different insider ownership proxies.

The relationship of the insider ownership with risk is complex in nature; the coefficients of the insider ownership proxy term and its squared term (table V) suggest that the relationship is positive up to an inflection point, after which the relationship turns negative. Thus, the insider owners undertake risky investments up to a certain level of their holdings, but if their holdings are more than that level, they tend to resort to risk-avoidance (in case of the model I, this turning point is at 45.07 percentage holdings of insider owners⁶). This means that up to a level of insider holdings, principal-principal conflicts are well prevented, but if insiders own beyond the majority threshold of close to 50 per cent, we can expect principal-principal conflicts to be present. We observe the same curvilinear relationship in the risk model (Table V), and M&A activity model (Table no. VI A and B). The signs of the coefficients of the insider-ownership proxy and its squared term in the M&A activity model are exactly opposite to the signs in the risk model.

In the Anglo-American context, we do find some empirical evidence where insider ownership has non-linear relationship with risk taking (Wright et al., 2002), and also, firm value (McConnel & Servaes, 1990). This relationship is comprehensible if one considers the fact that a professional manager's employment risk is non-diversifiable. However, the non-linearity

⁶ Since in this sample the turning point is close to the majority-holding threshold of 50 per cent, we can safely interpret this turning point to at the majority threshold.

observed (between risk/M&A activity and insider ownership) in the Indian corporate risk-taking is interesting, yet puzzling.

The manager in Indian companies is oftentimes an insider, that is, a promoter. Such a promoter-manager (owner-manager), who is an entrepreneur, doesn't face the non-diversifiable employment risk. Although, one could argue that his wealth might be ill-diversified since the substantial part of his wealth is invested in a single firm. However, this argument of 'portfolio concentration' would hold only for the stand alone companies, which form only one-thirds of our sample.

The two-thirds of the firms in our sample are business group affiliated firms, where the promoter-manager has his wealth invested in other group companies as well. Although it is difficult to assess the extent of portfolio diversification thus attained by a promoter-manager, the argument of investment concentration weakens. But, there is a possibility that a business group firm is resorting to 'tunnelling' (Morck & Yeung, 2003), i.e., the promoter managers are doing more risky projects through the firms in which they have lower cash flow rights compared to the control exhibited. Therefore, it is probable that through the lower layer firms (with low cash-flow rights) the promoters are taking more risks, tunnelling profits to higher layer firms (with high cash-flow rights) when profits occur, but when losses are suffered, the lower layer firms absorb them. Since, higher layer firms are the ones where promoter holds higher stake, i.e., higher cash flow rights, these are the firms where risk-aversion is resorted to. Thus, the evidence of risk-reduction and increased diversification (& overall M&A) activity beyond a level of insider ownership around the majority-stake level, points to the astounding fact that these promoter-managers are pursuing goals that are different from the objectives of the minority (dispersed) shareholders.

Industry relatedness is a dummy variable employed to separate diversification deals from the deals in the related industries. The proponents of portfolio theory under the aegis of modern financial theory have always considered diversification as a means of reducing unsystematic risk (Wagner & Lau, 1971, Statman, 1987). However, Lubatkin and O'Neill (1987) have argued and empirically shown that the implications of the portfolio theory fail to hold when corporations diversify. In the words of Lubatkin and O'Neill (1987), '*Diversification will not reduce*

unsystematic risk because management actions may alter the underlying risk profiles of combining businesses'. They argue that the success of a diversification deal depends largely on a manager's ability to handle the process. Our results on the industry relatedness (Table V) –show positive relationship between the diversification deals and the risk-taking behaviour of bidders, however, the coefficient is not significant. Moreover, this co-efficient shows the negative relationship with risk measure in the M&A activity model, yet again it is not significantly different from zero. Hence, with respect to the diversification dummy (industry relatedness), we are unable to support either of the contradictory propositions (Wagner & Lau, 1971 versus Lubatkin and O'Neill, 1987).

We observe that deal size has a positive association with the risk measure, suggesting that the principal-principal conflict is more of a concern in the smaller sized deals, but the same is well avoided in the bigger deals. We have employed firm size measured as the log of total assets of bidder in the M&A activity model (Table VI A and B), since in the context of deal activity, it is a more appropriate control variable than the deal size.

We observe that higher debt-equity levels lead to greater risk taking (model IV), but the group affiliation makes them risk-averse (Table V). An interesting result to be noted with respect to the control variables is the one with respect to the year dummy for 2009. In 2009, bidders exhibited risk aversion across all deals.

Fink et al. (2004) have empirically shown that younger firms are risk takers, but our empirical analysis fails to support this view. In fact, the age of the firm has no significant effect on the risk behaviour of its managers (except in one case, Table V).

Retention of Control Argument

Amihud and Lev (1981), in their arguments have mentioned that insider-owners might be '*motivated to make fewer acquisitions in order to retain control*'. However, this should be true only for deals where stock is used as the method of payment. Thus, we segregate stock-only deals, and cash-only deals, and analyse the impact of ownership on deal activity. As reported in Tables VII A and B and Tables VIII A and B, the results are similar to the previous analysis on M&A activity. However, the results are robust to all proxies of insider ownership only in case of

stock deals (Table VIII A). These results do not hold across all proxies in case of cash deals, also, are weak when we analyse M&A activity in unrelated industries for stock deals (Table VIII B). Thus, there is a weak possibility that retention of control could be a reason for lower M&A activity by highly concentrated bidders.

5.2.2 Managerial Compensation

Executive compensation is at the heart of many corporate governance studies (Castanias & Helfat, 1991⁷, Demsetz, 1983, Shleifer and Vishny, 1986). The Managerialism Theory (Berle & Means, 1932⁸, Tosi et al., 2000) argues that executives have a tendency to get entrenched by increasing firm size and consequently maximizing their salaries. Thus, we used three variables to test the impact of the manager's salary on his risk taking behaviour; the variables are: a. ED Comp, which is executive director's compensation, b. Managerial Comp, which is managerial compensation, and c. Ratio Dir to Emp, which is the ratio of director's compensation to the employees compensation, as reported at the quarter end before the deal announcement. However, these variables did not show significance in explaining insider owners risk behaviour. Moreover, these variables had to be dropped due to the multi-collinearity issue with other important independent variables in our tobit and negative binomial regression models.

5.2.3 Foreign Promoters

Research on corporate governance has considered the role of institutional investors (Gillan and Starks, 2000), block-holders, and other active investors in providing monitoring (Dharwadkar et al., 2008) and thus affecting the risk-taking behaviour of the firm (Wright et al., 1996). Since, foreign promoters are important outsiders who can provide effective monitoring and thereby impact the risk taking behaviour of managers, we did test the effect of this factor. But, we had to drop this variable from our model due to the multi-collinearity issue. However, in a separate test, where we drop the multi-collinear variable (insider ownership) and include foreign promoter

⁷ This paper that supports resource based view helps one understand that managerial skills are important resources for the firm that help it generate rents. The paper implies that skill managers help align manager-shareholder objectives.

⁸ Berle & Means in their book titled 'The Modern Corporate and Private Property' (1932) have argued that the (then) new form of organization in the US has led separation of ownership and control due to the high number of dispersed shareholders, and this separation raises questions on the corporate governance of a firm in question due to the concentration of power skewed in favour of managers.

holdings, we do not find that foreign promoters play significant monitoring role in the governance of a bidding firm.

6. Conclusion

In this study, we look at the agency theory relevant to emerging economies, which is called as the principal-principal agency conflict in the popular academic literature. There is extant empirical evidence pointing to opportunism undertaken by managers in the widely held Anglo-American companies. The primary driver for managers to resort to risk aversion is their employment risk which is non-diversifiable.

We undertake an inquiry into the risk-taking behaviour of promoter managers in an emerging economy, which presents us with a distinctive business setting with characteristics like high ownership concentration and complex structures -in the form of business groups with cross holdings and pyramidal arrangements. This context posits the possibility of the existence of the principal-principal agency between the dispersed shareholders and the majority shareholders. We observe that when the Indian bidders with high ownership concentration announce M&A deals, the investors have been observed to be reacting positively to such news. The existing empirical literature interprets this as a favourable risk increasing behaviour on the part of bidder managers. So, based on the event study analysis and the regression of abnormal returns on the ownership structure, we do not find evidence to suggest the presence of principal-principal conflicts in India.

However, on conducting a further analysis on the risk-taking behaviour of bidder firms, we observe a curvilinear relationship between the insider ownership and the idiosyncratic risk of bidders. We observe a similar curvilinear relationship between high ownership concentration and the diversification activity (as well as overall M&A activity) undertaken by promoter-managers. The direct relationship between risk-taking behaviour and ownership concentration, and the indirect relation between diversification activity and insider ownership, is consistent with the theoretical predictions. However, the non-linearity in these relationships suggest that insider managers resort to risk aversion beyond the majority (or the near-majority) level of ownership. This evidence is quite intriguing, since the ‘non-diversification of employment risk’ argument doesn’t hold for business group firms which comprise two-thirds of our sample. But, the business

group affiliated firms have a tendency to resort to tunnelling, and that could be distorting their risk-taking behaviour. The promoter-manager could be using lower layers firms for undertaking risky projects, and cushioning the higher level firms (where higher stakes are held) from the downsides of risks. The cash-flow rights are much lower compared to the control held (through the pyramid) in the lower layer firms, and therefore, a promoter manager can do risky investments, tunnel the gains out, and distance himself from the burden of losses when suffered. Thus, our study presents new evidence that principal-principal conflicts do exist in Indian firms, but we observe them only in bidders with very high ownership concentration.

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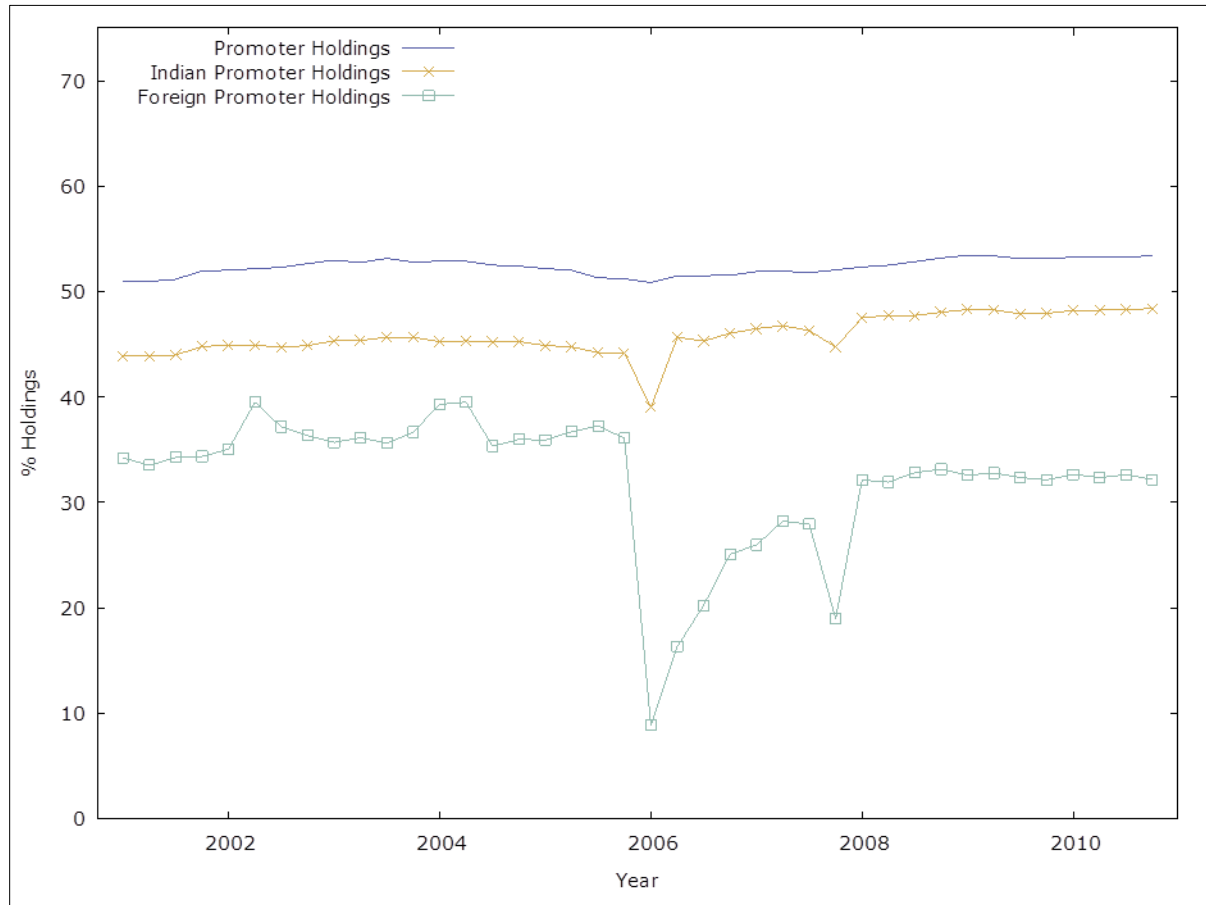
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Tables and Graphs

Graph I: Share of Promoter Holdings in S&P CNX 500 Companies



The graph is a representation of average promoter holdings in the S&P CNX 500 companies from March 2001 to December 2010 (quarter end figures). We have reported the total promoter holdings, which include Indian promoters, foreign promoters and persons acting in concert as promoters. We have also separately shown the Indian promoter holdings and foreign promoter holdings. The quarterly data on index companies is taken from the CMIE’s Prowess Database.

Table IA: Summary Statistics of the Data used in the OLS Regression on Cumulative Abnormal Returns

This table presents descriptive summary statistics of the sample that was used to estimate the Cumulative Abnormal returns regression. The definitions of the variables are presented in Appendix I.

Variable	N	Mean	Median	Std. Dev	Max	Min	Q1	Q3
Deal Value	216	187.0506	12.4285	935.7829	11791.2000	0.0150	4.0220	60.2470
Liq	215	0.1473	0.1180	0.1380	0.8240	0.0008	0.0397	0.2164
Liq Sqrt	215	0.3416	0.3435	0.1752	0.9078	0.0281	0.1994	0.4652
Log Deal Size	216	9.5923	9.4276	2.2320	16.2829	2.7081	8.2995	11.0062
Merger	216	0.2593	0	0.4392	1	0	0	1
Per cent Acq	215	0.5412	0.5	0.3407	1	0.0013	0.2300	1
Per cent Owned	216	0.6782	0.7007	0.3105	1	0.0279	0.4915	1
Target Stat	144	0.5139	1	0.5016	1	0	0	1
Debt Cost	211	0.0790	0.0705	0.0497	0.3172	0.0003	0.0483	0.1017
DE	216	0.7007	0.6	0.6508	3.4	0	0.255	0.97
Sqrt DE	216	0.7356	0.7746	0.4005	1.8439	0.0000	0.5050	0.9849
BG	216	0.7083	1	0.4556	1	0	0	1
Cross Border	216	0.3657	0	0.4828	1	0	0	1
PB	153	3.4277	2.2700	3.5688	22.9500	0.1700	1.4000	3.9700
Sales Growth 5yrs	216	0.1794	0.1652	0.2415	1.0515	-1.1431	0.0930	0.2578
Sales Growth 3yrs	216	0.1669	0.1252	0.3280	3.4731	-1.2540	0.0669	0.2076
Prom Hold	216	0.4895	0.4968	0.2040	0.895	0	0.3342	0.6397
Non Prom Hold	216	0.5042	0.4954	0.1998	1	0.1050	0.3603	0.6559

Table IB: Statistical Properties of Key Variables (used for Risk Analysis)

This table presents summary statistics of key variables used in the Risk analysis and the M&A activity analysis using Tobit and Negative Binomial regression models. The definitions of the variables are presented in Appendix I.

Variable	N	Mean	Median	Stdev	Max	Min	Q1	Q3
Var Ratio	224	1.0179	0.9687	0.4043	2.8801	0.1307	0.7262	1.2722
Mkt. Adj. Var Ratio	224	0.9802	0.9737	0.1763	1.5255	0.3495	0.8719	1.1011
Deal Value	224	83.292	12.708	226.646	1691.064	0.002	3.774	43.862
Percent Acq	224	0.6582	0.6767	0.3176	1.0000	0.1000	0.3925	1.0000
Percent Own	224	0.7637	0.9107	0.2791	1.0000	0.1000	0.5105	1.0000
Insider Own Proxy1	224	0.3283	0.3377	0.2463	0.8950	0.0000	0.0797	0.5005
Insider Own Proxy2	224	0.4544	0.4522	0.2000	0.8950	0.0000	0.3182	0.6099
Prom Hold	224	0.4712	0.4625	0.1887	0.8950	0.0000	0.3419	0.6144
Non Promoters Proxy1	224	0.5222	0.5305	0.1872	1.0000	0.1050	0.3836	0.6511
Non Promoters Proxy2	224	0.3106	0.2853	0.1680	0.9588	0.0217	0.1871	0.4130
Non Promoters Proxy3	224	0.1903	0.1670	0.1238	0.6653	0.0179	0.0914	0.2626
ED Comp	150	43.615	19.700	70.852	481.000	0.300	7.000	46.500
Managerial Comp	211	42.025	19.600	65.973	481.000	0.300	9.000	44.400
Ratio Dir to Emp	224	0.0552	0.0200	0.1703	2.3300	0.0000	0.0000	0.0500
Debt	203	20390.04	2134.30	72740.16	739044.80	0.50	595.90	9810.90
DE	224	0.7021	0.5000	0.9540	10.2200	0.0000	0.1150	0.9500
Debt_cost	214	0.0897	0.0755	0.0839	0.6718	0.0000	0.0469	0.1057
Pat by NW	224	0.2128	0.1902	0.2220	1.5335	-1.5511	0.1148	0.2919
PAT by Total Assets	224	0.1017	0.0878	0.0876	0.4537	-0.3011	0.0489	0.1369

Table IC: M&A Activity as per different Insider Ownership Buckets

This table presents the total and the average of M&A activity undertaken by all the Indian acquirers in our sample, classified as per different Insider Ownership buckets. Our objective is to observe the M&A activity by acquirers falling in certain Insider-Ownership bucket, and also to see if with increase / decrease in insider-ownership, the acquisitiveness of acquirers varies. (M&A activity is the number of M&A deals by an acquirer in 10 years prior to a deal announcement.)

M&A activity in 10 years	Insider Ownership (Proxy1)			
	Less than 10%	10% to 25%	25% to 50%	Greater than 50%
Sum of No. of deals	36	26	104	111
Average of No. of deals	5.14	2.17	0.95	1.17
Sum of No. of Unrelated Deals	22	19	44	52
Average of No. of Unrelated Deals	3.14	1.58	0.40	0.55

Table II: Pairwise Correlation Coefficients of Key Variables (used for Risk Analysis, *p-values are reported in the parenthesis*)

Variables	Var Ratio	Mkt. Adj. Var Ratio	Deal Value	Percent Acq	Percent Own	Insider Own Proxy1	ED Comp	Managerial Comp	Ratio Dir to Emp	Debt	DE	Debt Cost	Pat by NW
Mkt. Adj. Var Ratio	0.9220 (0)	1											
Deal Value	0.1224 (0.0676)	0.0949 (0.1569)	1										
Percent Acq	-0.0436 (0.5166)	-0.0627 (0.35)	-0.0887 (0.1861)	1									
Percent Own	-0.0567 (0.398)	-0.0599 (0.3726)	-0.0248 (0.7124)	0.7307 (0)	1								
Insider Own Proxy1	0.0680 (0.3106)	0.1147 (0.0866)	0.1555 (0.0199)	0.0859 (0.2002)	-0.0342 (0.6102)	1							
ED Comp	0.0069 (0.9336)	0.0144 (0.8611)	0.3701 (0)	-0.1083 (0.187)	-0.0188 (0.8192)	0.0832 (0.3117)	1						
Managerial Comp	-0.0383 (0.5805)	-0.0354 (0.6092)	0.3455 (0)	-0.1153 (0.0947)	-0.0019 (0.978)	0.0159 (0.8186)	0.9750 (0)	1					
Ratio Dir to Emp	-0.0097 (0.8852)	-0.0301 (0.6539)	-0.0593 (0.3773)	0.1140 (0.0888)	0.0669 (0.3191)	0.0471 (0.4835)	0.0573 (0.486)	0.0672 (0.3316)	1				
Debt	-0.0480 (0.4968)	-0.0504 (0.4752)	0.5625 (0)	-0.2026 (0.0037)	-0.0091 (0.898)	0.1533 (0.029)	0.4511 (0)	0.4169 (0)	-0.0621 (0.3791)	1			
DE	0.0514 (0.4442)	0.0546 (0.416)	-0.0080 (0.9056)	0.0592 (0.378)	-0.0104 (0.8768)	0.0669 (0.3191)	-0.0294 (0.7213)	-0.0464 (0.5025)	-0.0550 (0.4126)	0.0266 (0.7062)	1		
Debt Cost	-0.0550 (0.4231)	-0.0200 (0.7708)	-0.1270 (0.0637)	0.0446 (0.5164)	0.1442 (0.0351)	-0.1157 (0.0913)	-0.1043 (0.2166)	-0.0690 (0.3301)	-0.0635 (0.3555)	-0.1023 (0.1483)	-0.0676 (0.3248)	1	
Pat by NW	-0.1250 (0.0617)	-0.1058 (0.1142)	-0.0741 (0.2696)	-0.0749 (0.2644)	-0.0527 (0.4322)	-0.0270 (0.6878)	0.1509 (0.0653)	0.1344 (0.0513)	-0.0061 (0.928)	-0.0777 (0.2706)	-0.3256 (0)	0.1047 (0.1269)	1
PAT by Total Assets	-0.1090 (0.1038)	-0.0904 (0.1777)	-0.0598 (0.3732)	-0.0202 (0.7635)	-0.0371 (0.5805)	-0.0437 (0.5148)	0.1040 (0.2052)	0.1005 (0.1456)	-0.0100 (0.882)	-0.1116 (0.1129)	-0.3978 (0)	0.0585 (0.3948)	0.8189 (0)

Table III : Bidder Abnormal Returns and Promoter Holdings

This table presents a summary of bidder abnormal returns, i.e., cumulative abnormal returns over different event windows. For example, event window 'Day -1 to 0' presents cumulative abnormal returns over two days – a day before the event and the event day. The segregation is based on the significant ownership thresholds, beyond which a shareholder can either block special resolutions (in case of ownership of 26 per cent or more), or has majority holdings (in case of 50 per cent or more). No. of obs. are the number of deals that satisfied the cut-off levels of promoter holdings. Mean –is the mean value of the cumulative abnormal returns over a given event window of all the observations.

Panel I: Promoter Holdings < 26%														
No. of Obs.		Day 0	Day -1 to 0	Day -3 to 0	Day -5 to 0	Day -7 to 0	Day 0 to 1	Day 0 to 7	Day -1 to 1	Day -3 to 3	Day -2 to 0	Day -2 to +1	Day -3 to +1	Day -3 to -1
28	Mean	0.0033	-0.0010	-0.0064	-0.0097	-0.0110	0.0108	0.0215	0.0065	0.0092	-0.0040	0.0036	0.0012	-0.0097
	P-value	0.6860	0.9217	0.6448	0.5166	0.5382	0.3552	0.2701	0.6380	0.6321	0.6962	0.7989	0.9472	0.3385
Panel II: Promoter holdings >= 26% but less than 50%														
112	Mean	0.0047	0.0098	0.0132	0.0149	0.0153	0.0019	-0.0138	0.0070	0.0061	0.0087	0.0060	0.0104	0.0085
	P-value	0.1413	0.0377	0.0251	0.0382	0.0657	0.6501	0.0623	0.2033	0.4289	0.0800	0.2798	0.1085	0.0952
Panel III: Promoter Holdings >= 50%														
137	Mean	0.0119	0.0155	0.0185	0.0150	0.0127	0.0128	0.0050	0.0164	0.0147	0.0157	0.0166	0.0194	0.0066
	P-value	0.0002	0.0004	0.0013	0.0232	0.0790	0.0092	0.4282	0.0050	0.0356	0.0023	0.0109	0.0051	0.1098

Table IV : Cross Sectional OLS Regression Results

This table presents the results of the cross sectional OLS regression used to determine the factors affecting abnormal returns around M&A deal announcements. We have used robust standard errors method while estimating our regression model. The full version of the regression model is: $CAR_i^T = \alpha + \beta_1 Fin_i + \beta_2 Prom Hold_i + \beta_3 Rel_i + \beta_4 Percent Acq26_i + \beta_5 Rel Size_i + \beta_6 Sqrt DE_i + \beta_7 Debt Cost Dummy_i + \beta_8 Sales Growth 5 years_i + \beta_9 Industry Controls_i + \beta_{10} Recession Yr. Dummy_i + e_i$. The dependent Variable is CAR14 (-2 to 0) for all the above models. The p-values are in parentheses. * p<0.1, **p<0.05, ***p<0.01. 14 % of the deals in the sample are stock deals. The definitions of the variables are presented in the Appendix I.

Variables	Model I	Model II	Model III	Model IV	Model V	Model VI	Model VII	Model VIII
Fin	-0.0216** [0.018]	-0.0215** [0.017]	-0.0184** [0.045]	-0.0176* [0.063]	-0.0218** [0.031]	-0.0236** [0.023]	-0.0213** [0.039]	-0.0216** [0.033]
Prom Hold	0.0348** [0.041]	0.0387** [0.031]	0.0423** [0.029]	0.0451** [0.023]	0.0456** [0.019]	0.0459** [0.017]	0.0458** [0.018]	0.0462** [0.017]
Rel	0.0016 [0.821]	0.0017 [0.810]	-0.0025 [0.732]	-0.0028 [0.715]	0.0000 [0.996]	0.0005 [0.948]	-0.0002 [0.974]	0.0002 [0.978]
Per cent Acq26	0.0240*** [0.001]	0.0236*** [0.001]	0.0276*** [0.000]	0.0281*** [0.000]	0.0266*** [0.000]	0.0280*** [0.000]	0.0266*** [0.000]	0.0270*** [0.000]
Rel Size	0.0105** [0.011]	0.0101** [0.012]	0.0103*** [0.005]	0.0105*** [0.003]	0.0106*** [0.005]	0.0104*** [0.005]	0.0105*** [0.006]	0.0104*** [0.006]
Sqrt DE		0.0135 [0.107]	0.0186* [0.054]	0.0167* [0.093]	0.0256** [0.015]	0.0272*** [0.010]	0.0252** [0.016]	0.0261** [0.014]
Debt Cost Dummy			-0.0144* [0.053]	-0.0152* [0.051]	-0.0157** [0.048]	-0.0160** [0.042]	-0.0156* [0.050]	-0.0158** [0.047]
Sales Growth 5 yrs				0.0152 [0.231]	0.00958 [0.423]	0.0111 [0.337]	0.0101 [0.411]	0.0111 [0.352]
ITConltSftw					0.0264* [0.098]	0.0269* [0.092]	0.0265* [0.099]	0.0268* [0.097]
Textiles					-0.0103 [0.403]	-0.012 [0.342]	-0.0109 [0.388]	-0.0118 [0.356]
Yr. Dummy 0708, 0809 & 070809						-0.0091 [0.227]	-0.0032 [0.712]	-0.0059 [0.440]
N	239	239	222	216	216	216	216	216
adj. R-sq	0.0890	0.0970	0.1270	0.1290	0.1360	0.1370	0.1320	0.1340
F	5.0760	4.4700	5.2310	4.8820	3.8520	3.5310	3.5000	3.5230
P	0.0002	0.0003	0.0000	0.0000	0.0001	0.0001	0.0002	0.0002

Table V: Bidder Risk Taking and Insider Ownership - Tobit Regression

This table presents the results of the tobit regression analysis on the risk taking behaviour of insider owners. We have used robust standard errors method while estimating the model:

$Post - deal Risk over Pre - deal Risk_i = \alpha + \beta_1 Insider Own_i + \beta_2 Insider Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i$ (eg. Log Deal Size, Acq_Percent, DE, BG, Post_1991, industry effects, year effects.). P-values are in the parentheses. * p<0.1, ** p<0.05, *** p<0.01. Risk is the square root of the ratio of variances after and before the deal. Market adjusted variances is the ratio of the variables after and before the deal adjusted for market wide variance. The total number of observations in the followings models is 224.

Variables	Market Adj. Risk -Model I	Market Adj. Risk - Model II	Risk -Model III	Risk -Model IV
insiderown_proxy6	0.302** [0.017]		0.3710 [0.241]	
insiderown_proxy6_sqr	-0.335** [0.046]		-0.4230 [0.328]	
insiderown_proxy2		0.412** [0.032]		0.6920 [0.121]
insiderown_proxy2_sqr		-0.380* [0.071]		-0.6610 [0.189]
Rel_FF	0.02610 [0.224]	0.02410 [0.266]	0.03310 [0.527]	0.03050 [0.563]
Log_deal_size	0.0101** [0.030]	0.0112** [0.022]	0.0300** [0.011]	0.0318*** [0.009]
Acq_percent	-0.0438 [0.248]	-0.0469 [0.209]	-0.0557 [0.497]	-0.0650 [0.429]
DE	0.0246 [0.254]	0.0349 [0.104]	0.0765 [0.120]	0.0876* [0.071]
BG	-0.0517** [0.018]	-0.0452** [0.036]	-0.0852 [0.104]	-0.0774 [0.131]
Post_1991	0.0364 [0.136]	0.0400* [0.098]	0.0664 [0.244]	0.0684 [0.229]
ConsMatBldg	0.0412 [0.213]	0.0497 [0.161]	0.1090 [0.173]	0.1280 [0.110]
ITConltServ	0.0075 [0.808]	0.0203 [0.521]	0.0329 [0.653]	0.0517 [0.492]
OilGasPow	-0.0040 [0.907]	-0.0084 [0.814]	-0.0195 [0.809]	-0.0212 [0.797]
Yr._2009	-0.183*** [0.000]	-0.177*** [0.000]	-0.391*** [0.000]	-0.385*** [0.000]
Yr._2008	0.0805*** [0.005]	0.0837*** [0.004]	0.150** [0.030]	0.149** [0.033]
Sigma	0.152*** [0.000]	0.153*** [0.000]	0.361*** [0.000]	0.361*** [0.000]
Pseudo R-Sq	-0.4500	-0.4430	0.2150	0.2190
F	6.5230	6.5160	5.3930	5.3720
p	0.0000	0.0000	0.0000	0.0000
LL	103.60	103.10	-89.85	-89.44

Table VI A : Bidder M&A Activity and Insider Ownership - Negative Binomial Regression

M&A Activity is the dependent variable. This table presents negative binomial regression results for different models with different insider ownership proxies. The Model: $M\&A\ Activity_i = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i$ (eg. Log Assets, DE, Post_1991, industry effects, year effects.), is estimated using negative binomial regression analysis. P-values are in the parentheses. * p<0.1, ** p<0.05, *** p<0.01. The regression is estimated with White robust standard errors. The total number of observations in the following modes is 204.

Variable	insiderown_proxy1	insiderown_proxy2	insiderown_proxy3	insiderown_proxy4	insiderown_proxy5	insiderown_proxy6
insiderown	-4.383*** [0.003]	-3.112** [0.024]	-3.842*** [0.000]	-7.339*** [0.000]	-4.944*** [0.010]	-1.1410 [0.227]
insiderown_sqr	4.142*** [0.006]	2.994** [0.037]	3.845*** [0.003]	5.342*** [0.001]	3.694** [0.037]	1.1710 [0.337]
Rel_FF	0.0203 [0.905]	0.0044 [0.979]	0.0162 [0.924]	-0.0830 [0.598]	-0.0281 [0.865]	-0.0219 [0.902]
Log_Assets	0.272*** [0.000]	0.282*** [0.000]	0.301*** [0.000]	0.314*** [0.000]	0.296*** [0.000]	0.303*** [0.000]
DE	0.0424 [0.795]	0.0342 [0.832]	0.1920 [0.200]	0.0642 [0.686]	-0.0033 [0.984]	0.0818 [0.580]
Post_1991	-0.1190 [0.582]	-0.1290 [0.548]	-0.0650 [0.764]	-0.1020 [0.632]	-0.0994 [0.647]	-0.1450 [0.508]
ConsMatBldg	0.411** [0.046]	0.521*** [0.009]	0.454** [0.026]	0.767*** [0.000]	0.488** [0.014]	0.656*** [0.001]
ITConltServ	0.776*** [0.003]	0.854*** [0.003]	0.963*** [0.001]	0.640*** [0.005]	0.711*** [0.003]	0.999*** [0.002]
OilGasPow	0.0161 [0.952]	0.0080 [0.976]	-0.0816 [0.747]	-0.0133 [0.959]	0.0671 [0.792]	-0.0274 [0.913]
Yr._2009	0.2960 [0.108]	0.2740 [0.136]	0.1890 [0.280]	0.2460 [0.175]	0.2550 [0.155]	0.2130 [0.241]
Yr._2008	0.1670 [0.481]	0.1530 [0.521]	0.0958 [0.684]	0.1600 [0.488]	0.1580 [0.504]	0.1020 [0.668]
lnalpha	-0.819*** [0.006]	-0.733** [0.011]	-0.858*** [0.006]	-0.978*** [0.003]	-0.864*** [0.005]	-0.653** [0.027]
N	204	204	204	204	204	204
pseudo R-Sq	0.0930	0.0870	0.0970	0.1030	0.0940	0.0810
Chi-Sq	80.870	78.090	89.790	74.010	71.680	70.440
p	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LL	-295.9	-297.7	-294.6	-292.7	-295.4	-299.7

Table VI B : Bidder M&A Activity in Unrelated industries and Insider Ownership - Negative Binomial Regression

M&A Activity in unrelated industries is the dependent variable. This table presents negative binomial regression results for different models with different insider ownership proxies. The base model: $M\&A\ Activity_i = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i$ (eg. Log Assets, DE, Post_1991, industry effects, year effects.), is estimated using negative binomial regression. P-values are in the parentheses. * p<0.1, ** p<0.05, *** p<0.01. The regression is estimated with White robust standard errors. The total number of observations in the following modes is 204.

Variable	insiderown_proxy1	insiderown_proxy2	insiderown_proxy3	insiderown_proxy4	insiderown_proxy5	insiderown_proxy6
insiderown	-4.408** [0.037]	-3.037* [0.087]	-5.259*** [0.000]	-7.361** [0.040]	-4.495 [0.136]	-1.5040 [0.236]
insiderown_sqr	3.943* [0.064]	2.783 [0.134]	4.695*** [0.007]	5.201* [0.061]	3.0720 [0.260]	1.4640 [0.333]
Rel_FF	0.3160 [0.177]	0.2780 [0.235]	0.3050 [0.178]	0.2040 [0.351]	0.2640 [0.241]	0.2360 [0.320]
Log_Assets	0.274*** [0.001]	0.285*** [0.001]	0.313*** [0.000]	0.330*** [0.000]	0.306*** [0.000]	0.313*** [0.000]
DE	0.0796 [0.727]	0.0804 [0.720]	0.3140 [0.107]	0.1030 [0.639]	0.0236 [0.918]	0.1610 [0.438]
Post_1991	0.0902 [0.738]	0.0758 [0.781]	0.2510 [0.360]	0.1010 [0.702]	0.1080 [0.688]	0.0807 [0.773]
ConsMatBldg	0.832** [0.017]	0.967*** [0.003]	0.755** [0.028]	1.195*** [0.000]	0.907*** [0.006]	1.098*** [0.001]
ITConltserv	1.104*** [0.000]	1.209*** [0.000]	1.308*** [0.000]	0.944*** [0.003]	1.049*** [0.000]	1.384*** [0.000]
OilGasPow	0.2030 [0.575]	0.1890 [0.605]	0.1090 [0.753]	0.1350 [0.715]	0.2230 [0.530]	0.1520 [0.664]
Yr._2009	0.453* [0.086]	0.4190 [0.111]	0.2570 [0.216]	0.3740 [0.137]	0.4030 [0.119]	0.3400 [0.171]
Yr._2008	0.1910 [0.573]	0.1810 [0.600]	0.1210 [0.714]	0.2150 [0.532]	0.1900 [0.580]	0.1510 [0.658]
lnalpha	-0.2370 [0.454]	-0.1680 [0.588]	-0.4780 [0.186]	-0.2490 [0.435]	-0.2510 [0.426]	-0.0838 [0.783]
N	204	204	204	204	204	204
pseudo R-Sq	0.1000	0.0950	0.1210	0.1030	0.1000	0.0920
Chi-Sq	55.290	53.360	73.130	55.310	52.620	55.690
p	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LL	-203.7	-204.9	-199	-202.9	-203.8	-205.6

Table VII A : Cash Deal Bidders' M&A Activity and Insider Ownership - Negative Binomial Regression

M&A Activity by Cash deal bidders is the dependent variable. This table presents negative binomial regression results for different models with different insider ownership proxies. The base Model: $M\&A\ Activity_i = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i$ (eg. Log Assets, DE, Post_1991, industry effects, year effects.), is estimated using negative binomial regression. P-values are in the parentheses. * p<0.1, ** p<0.05, *** p<0.01. The regression is estimated with White robust standard errors. The total number of observations in the following modes is 154.

Variable	insiderown_proxy1	insiderown_proxy2	insiderown_proxy3	insiderown_proxy4	insiderown_proxy5	insiderown_proxy6
insiderown	-4.013** [0.022]	-2.819* [0.071]	-2.435* [0.052]	-9.028*** [0.002]	-3.768 [0.167]	0.0007 [0.999]
insiderown_sqr	3.547* [0.057]	2.4680 [0.147]	2.2210 [0.143]	6.261*** [0.008]	2.4130 [0.328]	-0.0268 [0.985]
Rel_FF	0.0552 [0.780]	0.0167 [0.934]	0.0280 [0.889]	-0.0308 [0.863]	-0.0022 [0.991]	-0.0180 [0.932]
Log_Assets	0.269*** [0.001]	0.276*** [0.001]	0.304*** [0.000]	0.317*** [0.000]	0.294*** [0.000]	0.297*** [0.000]
DE	0.346* [0.076]	0.343* [0.080]	0.412** [0.040]	0.2890 [0.122]	0.2790 [0.145]	0.344* [0.080]
Post_1991	-0.1680 [0.549]	-0.1670 [0.545]	-0.1500 [0.581]	-0.1800 [0.505]	-0.1250 [0.657]	-0.2190 [0.420]
ConsMatBldg	0.3220 [0.234]	0.461* [0.069]	0.519** [0.038]	0.697*** [0.006]	0.4130 [0.131]	0.747*** [0.002]
ITConltServ	0.894** [0.012]	0.981*** [0.010]	1.113*** [0.006]	0.431 [0.177]	0.869*** [0.007]	1.198*** [0.009]
OilGasPow	0.2810 [0.273]	0.2930 [0.246]	0.1700 [0.494]	0.2430 [0.334]	0.3310 [0.172]	0.2660 [0.269]
Yr._2009	-0.0142 [0.965]	-0.0368 [0.910]	-0.0981 [0.754]	-0.0235 [0.944]	-0.0785 [0.808]	-0.1100 [0.748]
Yr._2008	0.2470 [0.370]	0.2270 [0.414]	0.1690 [0.541]	0.2130 [0.401]	0.2220 [0.415]	0.1500 [0.597]
Inalpha	-0.762** [0.016]	-0.700** [0.026]	-0.695** [0.028]	-0.974** [0.015]	-0.807** [0.018]	-0.588* [0.063]
N	154	154	154	154	154	154
Pseudo R-sq	0.1000	0.0960	0.0960	0.1130	0.1000	0.0890
Chi-Sq	66.68	64.29	63.15	63.80	59.02	53.59
p	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LL	-219.5	-220.6	-220.5	-216.5	-219.5	-222.3

Table VII B : Cash Deal Bidders' M&A Activity in Unrelated Industry and Insider Ownership - Negative Binomial Regression

M&A Activity in unrelated industries by cash deal bidders is the dependent variable. This table presents negative binomial regression results for different models with different insider ownership proxies. The following Model is estimated using negative binomial regression with White robust standard errors: $M\&A\ Activity_i = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i$ (eg. Log Assets, DE, Post_1991, industry effects, year effects.). P-values are in the parentheses. * p<0.1, ** p<0.05, *** p<0.01. The total number of observations in the following modes is 154.

Variable	insiderown_proxy1	insiderown_proxy2	insiderown_proxy3	insiderown_proxy4	insiderown_proxy5	insiderown_proxy6
insiderown	-5.211** [0.030]	-4.131** [0.032]	-3.622** [0.036]	-10.74*** [0.001]	-6.418* [0.064]	-0.663 [0.654]
insiderown_sqr	4.371* [0.087]	3.4610 [0.109]	2.9880 [0.150]	7.193*** [0.006]	4.4130 [0.177]	0.6470 [0.730]
Rel_FF	0.2940 [0.286]	0.2390 [0.390]	0.2560 [0.351]	0.1410 [0.590]	0.1850 [0.490]	0.2090 [0.462]
Log_Assets	0.251*** [0.007]	0.256*** [0.006]	0.310*** [0.000]	0.326*** [0.000]	0.280*** [0.002]	0.297*** [0.001]
DE	0.404* [0.100]	0.407* [0.098]	0.490** [0.042]	0.3270 [0.192]	0.3120 [0.217]	0.451* [0.067]
Post_1991	0.2320 [0.502]	0.2500 [0.465]	0.3010 [0.359]	0.2120 [0.507]	0.2730 [0.412]	0.1880 [0.567]
ConsMatBldg	0.5070 [0.269]	0.684* [0.089]	0.742* [0.069]	1.072*** [0.006]	0.5810 [0.170]	1.120*** [0.003]
ITConltServ	1.176*** [0.003]	1.274*** [0.002]	1.471*** [0.001]	0.632* [0.070]	1.079*** [0.002]	1.615*** [0.001]
OilGasPow	0.699** [0.047]	0.728** [0.037]	0.5210 [0.129]	0.641* [0.075]	0.731** [0.034]	0.665** [0.047]
Yr._2009	0.0011 [0.998]	-0.0189 [0.968]	-0.1470 [0.700]	-0.0216 [0.962]	-0.0580 [0.900]	-0.1260 [0.796]
Yr._2008	-0.0393 [0.920]	-0.0464 [0.906]	-0.1300 [0.746]	-0.0424 [0.912]	-0.0517 [0.894]	-0.1280 [0.753]
lnalpha	-0.4060 [0.280]	-0.3430 [0.352]	-0.3510 [0.348]	-0.6070 [0.206]	-0.5030 [0.227]	-0.0851 [0.802]
N	154	154	154	154	154	154
Pseudo R-sq	0.1160	0.1120	0.1140	0.1310	0.1200	0.0980
Chi-Sq	46.420	44.810	43.700	66.210	45.740	39.030
p	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001
LL	-148.6	-149.3	-148.9	-146.1	-147.9	-151.6

Table VIII A : Stock Deal Bidders' M&A Activity and Insider Ownership - Negative Binomial Regression

M&A Activity by stock deal bidders is the dependent variable. This table presents negative binomial regression results for different models with different insider ownership proxies. The base Model: $M\&A\ Activity_i = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i$ (eg. Log Assets, DE, Post_1991, industry effects, year effects.), is estimated using negative binomial regression. P-values are in the parentheses. * p<0.1, ** p<0.05, *** p<0.01. The regression is estimated with White robust standard errors. The total number of observations in the following modes is 38.

Variable	insiderown_proxy1	insiderown_proxy2	insiderown_proxy3	insiderown_proxy4	insiderown_proxy5	insiderown_proxy6
insiderown	-8.604*** [0.000]	-9.398*** [0.000]	-4.134* [0.078]	-10.58*** [0.000]	-10.87*** [0.000]	-3.981* [0.058]
insiderown_sqr	9.219*** [0.000]	10.29*** [0.000]	6.559*** [0.009]	10.02*** [0.000]	11.16*** [0.000]	6.484*** [0.007]
Rel_FF	-0.1400 [0.550]	-0.0757 [0.751]	0.3530 [0.207]	-0.3040 [0.335]	-0.3730 [0.255]	0.5670 [0.138]
Log_Assets	0.761*** [0.000]	0.897*** [0.000]	0.617*** [0.000]	0.575*** [0.000]	0.682*** [0.000]	0.612*** [0.000]
DE	-1.737*** [0.000]	-1.899*** [0.000]	-1.437*** [0.000]	-1.549*** [0.000]	-1.801*** [0.000]	-1.671*** [0.000]
Post_1991	-0.4670 [0.401]	-0.3160 [0.573]	-0.834* [0.064]	-0.6430 [0.189]	-1.047** [0.049]	-0.9950 [0.106]
ConsMatBldg	-0.0308 [0.933]	-0.1790 [0.671]	-0.898** [0.049]	0.1180 [0.797]	0.4060 [0.321]	-1.059* [0.051]
ITConltserv	1.736*** [0.006]	2.084*** [0.001]	1.158** [0.046]	1.425** [0.021]	1.693*** [0.007]	1.058* [0.095]
OilGasPow	-2.387*** [0.000]	-2.974*** [0.000]	-2.477*** [0.003]	-1.596*** [0.004]	-2.006*** [0.000]	-2.191*** [0.001]
Yr._2009	0.1420 [0.602]	0.1840 [0.532]	0.4330 [0.115]	0.1070 [0.688]	0.0885 [0.711]	0.3520 [0.164]
Yr._2008	-0.5580 [0.225]	-0.7340 [0.116]	0.0597 [0.903]	0.1040 [0.809]	0.2460 [0.599]	0.1520 [0.778]
lnalpha	-17.11*** [0.000]	-25.35 -	-31.27 -	-16.88*** [0.000]	-20.42 -	-16.55*** [0.000]
N	38	38	38	38	38	38
Pseudo R-sq	0.3300	0.3410	0.3080	0.3290	0.3380	0.2960
Chi-Sq	73.97	83.38	110.20	98.39	87.99	108.20
p	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LL	-41.04	-40.37	-42.4	-41.15	-40.56	-43.15

Table VIII B : Stock Deal Bidders' M&A Activity in Unrelated Industry and Insider Ownership - Negative Binomial Regression

M&A Activity in unrelated industries by stock deal bidders is the dependent variable. This table presents negative binomial regression results for different models with different insider ownership proxies. The following Model is estimated using negative binomial regression: $M\&A\ Activity_i = \alpha + \beta_1 Insider\ Own_i + \beta_2 Insider\ Own_i^2 + \beta_3 Rel_i + \beta_4 Controls_i$ (eg. Log Assets, DE, Post_1991, industry effects, year effects.). P-values are in the parentheses. * p<0.1, ** p<0.05, *** p<0.01. The regression is estimated with White robust standard errors. The total number of observations in the following modes is 38.

Variable	insiderown_proxy1	insiderown_proxy2	insiderown_proxy3	insiderown_proxy4	insiderown_proxy5	insiderown_proxy6
insiderown	-5.7750 [0.133]	-4.7450 [0.233]	-5.7620 [0.128]	-6.3820 [0.244]	-5.8880 [0.303]	3.6530 [0.316]
insiderown_sqr	8.722* [0.050]	8.112* [0.090]	9.038* [0.055]	9.7690 [0.108]	9.4860 [0.147]	5.6410 [0.102]
Rel_FF	-0.3600 [0.508]	-0.4160 [0.469]	0.2200 [0.683]	-0.5040 [0.433]	-0.6070 [0.403]	1.161** [0.029]
Log_Assets	0.897** [0.011]	0.895*** [0.010]	0.665*** [0.009]	0.493** [0.026]	0.716*** [0.002]	1.193*** [0.000]
DE	-2.165*** [0.000]	-2.198*** [0.000]	-1.724** [0.034]	-1.920*** [0.000]	-2.441*** [0.000]	-6.171*** [0.000]
Post_1991	-0.8120 [0.262]	-0.9070 [0.226]	-0.9920 [0.130]	-1.0970 [0.119]	-1.803* [0.089]	-3.979*** [0.000]
ConsMatBldg	0.5000 [0.464]	0.5040 [0.440]	-0.4620 [0.643]	0.7390 [0.340]	1.1560 [0.217]	-2.527*** [0.004]
ITConltServ	2.291* [0.099]	2.3110 [0.107]	1.2540 [0.167]	2.7220 [0.114]	2.697* [0.073]	0.9090 [0.246]
OilGasPow	-3.538** [0.028]	-3.586** [0.025]	-3.258* [0.053]	-1.909** [0.049]	-2.615*** [0.006]	-6.500*** [0.000]
Yr._2009	0.3320 [0.422]	0.2830 [0.472]	0.947* [0.085]	0.1910 [0.644]	0.3010 [0.403]	1.234*** [0.000]
Yr._2008	0.8610 [0.272]	0.9640 [0.193]	1.369** [0.024]	1.267* [0.065]	1.751* [0.051]	1.896*** [0.001]
Lnalpha	-16.57*** [0.000]	-16.22*** [0.000]	-15.51*** [0.000]	-16.53*** [0.000]	-44.93 -	-58.77 -
N	38	38	38	38	38	38
Pseudo R-sq	0.3680	0.3750	0.3590	0.3850	0.3840	0.4680
Chi-Sq	105.70	106.50	91.65	104.00	136.30	129.40
P	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
LL	-27.99	-27.70	-28.39	-27.23	-27.27	-23.57

Appendix I: Variable Definitions

Acq_percent	The percentage of stake acquired in a deal
BG	A dummy variable to identify business group affiliated bidders; it assumes value 1 if an acquirer is a business group affiliated firm, otherwise it takes value 0
CAR	Cumulative Abnormal Return. Calculated as total of daily abnormal returns for a given event window T (i.e., t_1 to t_2)
Cross Border	A dummy variable, which assumes value 1 if a deal is a cross border deal, otherwise it takes value 0.
ConsMatBldg	A dummy variable, which assumes value 1 if an acquirer's industry is construction material, building/construction and engineering
DE	Square root of the debt-equity ratio of an acquirer
Debt Cost	The cost of debt is measured as the ratio of interest expense and the average borrowings in the quarter before deal announcement.
Debt Cost Dummy	A dummy variable, which assumes value 1 if the acquirer's cost of debt before the deal announcement is more than the median cost of debt, 0 otherwise. The cost of debt is measured as the ratio of interest expense and the average borrowings in the quarter before deal announcement.
FIN	The method of financing for a deal, defined as a binary variable, assuming the value 1 if it is a stock offer, 0 if it is a cash offer
Insider Own or insiderown	The proxy for promoter holdings expressed as percentage of equity holdings by promoters.
Insider Own^2 or insiderown_sqr	The square of promoter holdings.
Insiderown_Proxy1	The total promoter holdings, including holdings by the persons acting in concert
Insiderown_Proxy2	The sum of holdings by all the Promoters, Indian as well as foreign
Insiderown_Proxy3	The total of Indian Promoters and the persons acting in concert
Insiderown_Proxy4	The holdings by promoters as well as non-promoter institutions like mutual funds, UTI (Unit Trust of India), insurance companies, etc.
Insiderown_Proxy5	The sum of the holdings of Promoters and non-promoter FIIs
Insiderown_Proxy6	The sum of holdings by Indian promoters
ITConltSftw	A dummy variable, which assumes value 1 if an acquirer's industry is IT consulting and services, and software
Liq	Proxy for an acquirer's liquidity. We have calculated this proxy as a ratio of cash and marketable securities over the total assets.
Liq Sqrt	The square root of an acquirer's liquidity. We have calculated this proxy as a ratio of cash and marketable securities over the total assets.
Log_Assets	The log of bidder's total assets
Log Deal Size	The log of the transaction value
Market Adjusted Risk	The market adjusted standard deviation of stock returns are used to calculate this measure. This measure is a ratio of the post deal market adjusted standard deviation of returns over the pre-deal market adjusted standard deviation of returns.

Appendix I: Variable Definitions (contd.)

Merger	A dummy variable, which takes value 1 if the form of a deal is merger, otherwise it takes value 0
Non-Prom Hold	Percentage of outstanding shares held by non-promoters in a bidding company
OilGasPow	A dummy variable, which assumes value 1 if an acquirer's industry is oil and gas, petrochemicals, power, and other energy
Oper Profit Sqrt	Square root of acquirer's operating profits before the deal announcement
Operating Profit Diff	A dummy variable, which takes value 1 if an acquirer's operating profit margin is more than the target's, otherwise, it takes value 0
PB	Acquirer's price to book ratio before the deal announcement
Percent Acq	The percentage of stake acquired in a deal
Percent Acq26	A dummy variable based on the percentage of stake acquired in a deal. It assumes value 1 if the per cent acquired exceeds 26 per cent, otherwise it takes value zero
Percent Owned	The percentage of the target's outstanding shares held by an acquirer after the bid
Premium	The ratio of the offer price to the target's share price (four weeks prior to the deal announcement).
Prom Hold	Promoter holdings of an acquirer before deal announcement, expressed as a percentage of total outstanding shares.
Prom Hold Acq50	The percentage of promoter holdings for a deal if the percentage of stake acquired is 50 per cent or more. This variable assumes value 0 for the observations where the percentage of stake acquired is less than 50.
Post 1991	Companies that were established post 1991. This measure is provided by the CMIE's Prowess Database.
Recession Yr. Dummy	A dummy variable to identify recession years -2007, 2008 and 2009
Rel	The industry relatedness dummy variable for a deal, assuming value 0 if the acquirer and the target are in the same industry, 1 otherwise. For determining whether a merger is happening in the same industry we have looked at the SIC codes (up to the third digit), i.e., if the acquirer and the target have the same SIC up to the 3 digits then we identify that deal as the one happening in a related industry.
Rel_FF	The industry relatedness dummy variable for a deal, assuming value 0 if the acquirer and the target are in the same industry, 1 otherwise. For determining whether a merger is happening in the same industry we have considered the 49 industry classification provided by Fama-French.
Rel Size	The relative size of a transaction, measured as the ratio of the value of the transaction over the market value of its acquirer.
Risk	The raw standard deviation of stock returns are used to calculate this measure. This measure is the ratio of the post deal standard deviation of returns over the pre-deal standard deviation of returns.
Sales Growth 3 years	The compound annual growth rate of sales of an acquirer for three years prior to the acquisition
Sales Growth 5 years	The compound annual growth rate of sales of an acquirer for five years prior to the acquisition
Sqrt DE	The square root of the acquirer's debt-equity ratio before deal announcement
Target Stat	The target's listing status dummy, which assumes value 1 if the target company is listed, otherwise it takes value 0.
Yr_2008	A dummy variable that assumes value 1 if the deal was announced in 2008
Yr_2009	A dummy variable that assumes value 1 if the deal was announced in 2009

