

Board characteristics, ownership structure and the market for corporate control in India

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Abstract

This study examines the effect of board characteristics and ownership structure of the firm on (1) the likelihood of its getting acquired, (2) the likelihood of majority acquisition among all the acquisitions of publicly listed Indian firms, and (3) its wealth effect. The board characteristics consist of board size, proportion of independent directors, and the duality of chairman and CEO. The ownership structure variables are the insiders (promoters) ownership and other institutional ownership. Using data of all the acquisitions of Indian public firms during 2001 to 2011, the results show that the board size and institutional ownership has a positive relationship, promoters' ownership has an inverted U-shaped relationship, and the duality has a negative relationship with the probability of acquisition. On the other hand, the promoters' ownership has a U-shaped relationship with the probability of majority acquisition. Finally, the board characteristics and ownership structure do not have a significant relationship with the wealth effect of target firm.

1. Introduction

Market for corporate control is one of the ways to discipline inefficient and/or incompetent managers (Jensen and Ruback 1983). However, in India, the market for corporate control may not work effectively due to high insider (promoters) ownership, which quite often exceeds 50%. This high insider ownership coupled with high stake of Indian financial institutions and takeover code, which is usually in favor of incumbent promoters¹, prohibits hostile takeovers in India (Mathew 2007; Armour et al. 2011). In spite of that, low promoters' ownership in some companies² may provide an opportunity to market participants to get control of the target firm. The market for corporate control does not require actual takeover to happen. It may still work efficiently as long as there is a threat of takeover to a firm even without any real takeover happening (Manne 1965).

Morck et al. (1988) examine the relationship between firm value and the insider ownership and report a non-linear relationship. They find an evidence of managerial entrenchment for some range of managerial ownership. Subsequent studies also report the same up/down/up type of relationship between performance and ownership concentration (Cho 1998; Short and Keasey 1999; Gugler et al. 2008). On the other hand, McConnell and Servaes (1990) observe only the first part of the curve – an inverted parabola – in their US data. Thomsen and Pedersen (2000) get similar relationship using the data of European companies. The literature has also discussed about the endogeneity problem in these studies (Demsetz 1983; Demsetz and Lehn 1985). Demsetz and Villalonga (2001) find no relationship after addressing the issue of endogeneity.

If managers have very high ownership in the firm, second type of agency issues comes into play where agency costs are dominant between the majority and the minority shareholders (Villalonga and Amit 2006). In the literature this has also been named as the principal-principal problem (Jensen and Meckling 1976; Berle and Means 1932). Emerging economies exhibit the second type of agency problem where usually the insiders have a high ownership in the firm through pyramidal ownership structure. In Indian context, there is very high ownership of the promoters. Promoters are an insider to the firm as compared to other shareholders. Many times, the CEO or/and the chairman are one of the promoters. This means that promoters have substantive powers to take corporate policy decisions like acquisitions or to reject any takeover bid. The unique setting where insiders hold a substantial portion of ownership mitigates typical agency

¹ E.g. a provision of allowing creeping acquisition up to 5% in a year if an owner holds more than 25%

² Around 20 percent of all listed companies in India had less than 25% of promoters' ownership in 2006 (Sarkar and Sarkar, 2012)

costs between owners and managers which exist in firms in developed economies. However, high promoters' ownership creates the second type of agency costs, i.e. between the two sets of shareholders.

The role of the board is to minimize the agency costs between managers and shareholders (Hermalin and Weisbach 2001). The size of board may influence the outcome of takeover. There may be more divergent views in a larger board, which may put some restrictions on the managers and promoters. Moreover, it is not just the board size, which will affect the takeover outcome. It is the representation of independent directors on the board, which should have more effective control on the managers and promoters. According to Hermalin and Weisbach (2001), existing literature shows that there is no relation between the board composition and firm performance. They, further, note down that the board size has a negative relationship with the firm performance. Baysinger and Butler (1985) find no contemporaneous relationship between the board composition and relative firm performance. However, there is a positive relationship between lagged board composition and firm performance. The board represents the bargaining power of the CEO with other directors of the board. These issues have important ramification in a significant corporate policy issue such as a takeover.

In this study, we examine the effect of board characteristics and ownership structure on the likelihood of a takeover of the firm. For this study, we use the characteristics such as board size, proportion of independent directors, and the duality of chairman and CEO. Insider (promoters) ownership and other institutional ownership are used to measure the effect of ownership structure of the firm. This study uses the data of all acquisitions of listed Indian firms during 2001 to 2011. The results show that the board size and institutional ownership has positive effect, promoters' ownership has an inverted U-shaped relationship, and duality has a negative effect on the probability of the firm getting acquired. Among control variables, firm size and business group affiliation has a positive impact while firm age has a negative impact on the probability of a firm getting acquired. Further results show that promoters' ownership has a U-shaped relationship with the probability of majority acquisition. Firm size has a negative impact on the probability of majority acquisition. However, the board characteristics and ownership structure do not have a significant relationship with the wealth effect of target firm.

This study contributes to the existing literature in several ways. First, this study provides an evidence of the effect of board characteristics and ownership structure on the likelihood of takeover in an emerging market. The existing studies examining similar issues use acquisitions

data from developed markets where institutional arrangements are very different from an emerging market such as India. Insider ownership may not always be direct ownership of managers and directors as the concept of promoters is unique to Indian market. Additionally, there are rarely any hostile takeovers in India, which may play an important role in determining these relationships. Second, the period of study has an evolving regulatory framework for both the takeover market and board characteristics in India. Third, this study also contributes to the existing literature on corporate governance in India, where existing research is limited (Black and Khanna 2007; Sarkar 2011; Sarkar and Sarkar 2000). Finally, the results of this study are expected to provide some guidance to regulatory agencies about the future directions of capital market regulatory framework, especially with respect to corporate governance and takeover regulations in India.

2. Related Literature

There are few studies examining the relationship between the ownership structure and the firm performance using Indian data. Sarkar and Sarkar (2000) examine the relationship between ownership of directors and relatives and Tobin's Q for the sample of 1567 manufacturing firms in the year 1995-96. They find that a negative relationship in the ownership range of 0-25% and a positive relationship in the range of 25-100%. Starting from the year 2001, SEBI mandated the listed firms to disclose the quarterly ownership data consisting of ownership by promoters and non-promoters separately. Selarka (2005) examines the relationship between the promoters' ownership and market-to-book ratio (M/B ratio) for 1397 Indian manufacturing firms in the year 2001. She finds a negative relationship between M/B ratio and promoters' ownership in the range of 0-45(63%), and a positive relationship beyond that. Using a larger dataset of 1833 firms during 2001-2004, Pant and Pattanayak (2007) find a negative relationship between Tobin's Q and promoters' ownership in the range of 0-20% or 0-49%; and a positive relationship beyond that. Surprisingly, the results of all the studies using Indian data are almost opposite the results in the developed markets.

Using data from Korea, Black et al. (2006) illustrate that Korean firms with majority outside directors have higher Tobin's Q. Black and Kim (2012) find a positive effect of boards with 50% or greater outside directors on share prices. They also report somewhat weak evidence of a positive impact of creation of an audit committee on share prices. In their survey paper,

Claessens and Yurtoglu (2013)³ mention that the corporate governance reforms made it compulsory to have a substantial portion of independent directors in board in these countries. After that, there is a positive effect of board independence documented in Korea and India. Bris and Cabolis (2008) report that takeover premium is higher if investor protection in the acquirer's country is stronger than in the target's country. Ferreira et al. (2009) find that foreign institutional ownership significantly increases the probability of acquisition of a firm by a foreign acquirer. Bhagat et al. (2011) find that abnormal returns of emerging country acquirers are positively related with better corporate governance in target country.

There are few studies in developed markets examining the role of the internal corporate governance mechanism on the market for corporate control. Bates et al. (2008) examine the role of target board classification on the likelihood of its takeover and the wealth effect to target. They find that target board classification does not change the likelihood of the firm being acquired, but it reduces the likelihood of receiving takeover bid. Bange and Mazzeo (2004) examine the role of board composition on takeover premium and they find that independence of target board leads to a less premium paid and the offer is less likely to succeed. Bauguess et al. (2009) show that there is a positive relationship between insider ownership and target firm return, but outside ownership has a negative relationship with the target firm return. Furthermore, Moeller (2005) illustrates a negative relationship between CEO ownership and takeover premiums. On the other side, Stulz et al. (1990) and Song and Walkling (1993) find that managerial ownership and institutional ownership are positively and negatively related to target gains, respectively.

All the above studies analyze these issues in a developed market. However, we analyze this issue in a large emerging market, which has a different corporate governance regulation and practices. Agency issues are very different in the emerging markets due to concentrated ownership and less oversight by the regulators with respect to corporate governance mechanism. This setting of concentrated ownership and not so advanced corporate governance regulations compared to developed markets makes this study much relevant and desired. To the best of our knowledge, this is the first such kind of study using an emerging market data.

³ Claessens and Yurtoglu (2013) provide a detailed literature review on corporate governance in emerging markets.

3. Regulatory Framework in India

India has seen evolving regulatory framework both for corporate governance measures and takeover market in last two decades⁴. Before the year 1992, the substantial acquisition of shares was governed by the listing agreement of stock exchanges. SEBI (Securities and Exchange Board of India) notified takeover code first time in 1994. In the year 1995, Bhagwati committee was formed to examine the existing takeover code and suggest changes. Subsequently, based on the recommendations of the committee, the takeover code was revised in the year 1997. In the year 2001, Bhagwati committee was reconstituted and the takeover code was again revised in the year 2002. Recently, in the year 2011, the new takeover code became effective. One of the provisions of the new takeover code is that any acquirer can acquire less than 25% shares in a listed company without taking control of the target. Earlier, this limit was 15%. However, if the acquirer acquires 25% or more, then the acquirer needs to make an open offer of at least 26%.

On the board characteristics side, clause 49 of listing agreement was adopted starting from the year 2001 and it became applicable to all the firms starting from year 2003 (Chakrabarti et al. 2008). The clause 49 of the listing agreement stipulates composition of the board, audit committee, and corporate governance report, among other provisions. It requires that at least half of the board members should be non-executive members and at least one third of board members should be independent directors if chairperson is non-executive. In case of executive chairperson, the independent directors should be at least 50% of the board. This changing regulatory framework provides a very good opportunity to test the role of corporate governance mechanism in India and its implications thereof.

4. Data

The data for this study are collected from two data sources: CMIE Prowess and Thomson SDC platinum mergers and acquisitions database. The period of analysis is 2001 to 2011 since ownership data are available starting from the year 2001. We get details of the board of directors, promoters' ownership, non-promoters institutional ownership, debt to equity ratio, market to book ratio, total assets, firm age, business group affiliation, and NIC code from the Prowess database for all the listed companies during 2001 to 2011. There are several blank spaces under the category of independent directors. We consider only those firms where independent

⁴ E.g. now an acquirer can acquire less than 25% of shares in the target (it was 15 % earlier) without taking control and if acquirer acquires more than 25% of shares in target, it is mandated for acquirer to make an open offer of at least 26%.

directors' categorization is available for all the directors in a firm-year. For multivariate analysis, we need data of all variables available for each firm-year. Therefore, we consider only those firms where data for all the variables are available in a particular year. Thus, my dataset is unbalanced panel of all the listed firms in India during 2001 to 2011 for which data of all the variables required for regressions are available. The final dataset consists of 26082 firm-year observations.

For the acquisitions data of Indian firms, we get all the acquisitions of Indian public companies during the year 2001 to 2011 from SDC database. Just to highlight some facts about data available in SDC, there are total 2313 completed acquisitions of listed Indian companies recorded during 2001 to 2011. This sample consists of 1702 and 611 acquisitions of public targets in India by domestic and foreign companies, respectively. We match the scrip codes and/or name of all these companies with 26082 firm-year observations collected from the Prowess database. A binary dependent variable is created for all firm-years such that if a firm is acquired in a particular year, the dependent variable takes value one, else zero. In the final dataset of 26082 firm-year observations, there are total 1074 acquisitions.

In 92 of these 1074 acquisitions, acquirers already had majority ownership in the target at the time of acquisition. Acquirers get a majority control in the target in 146 acquisitions out of 982 acquisitions. For the analysis of effect of board characteristics and ownership structure on the probability of the majority acquisition, we consider this dataset of 982 acquisitions. we get other variables from SDC database for this dataset. These variables are: toehold (acquirer's ownership in target at the time of acquisition, private acquirer, and individual acquirer. Finally, for the wealth effect analysis, adjusted closing share prices of all the target firms are collected from the Prowess database. BSE100 return is considered as the proxy for market return.

5. Methodology

We use logistic regressions to examine the effect of board characteristics and ownership structure on the likelihood of acquisition. Stulz (1988) illustrates that an increase in the insider ownership reduces the likelihood of a takeover. The large shareholders other than insiders are more likely to monitor firm's management. There may be a possibility of takeover due to the presence of large outside shareholders (Shleifer and Vishny 1986). If large outside shareholders are not happy with the current management, they may sell their ownership to somebody else. Therefore, there should be a positive relationship between outside large shareholders and the likelihood of takeover.

Independent directors are supposed to be the trustee of non-promoter shareholders. The independent directors should act in the interest of non-promoters. If a firm is not performing well, it should be taken over for a better and efficient management. Therefore, we should see a positive relationship between independent directors' proportion and likelihood of takeover if a firm is not performing well. However, the relationship is not clear if the performance of the firm is good. The agency problem becomes more severe if insiders (promoters) are appointed as either CEO or chairman of the board. If there is a duality (same person as CEO and the chairman), the CEO/chairman exercises higher power in the corporate policy decisions since he/she holds dual position. Thus duality increases the agency costs between shareholder and managers. Therefore, duality should reduce the likelihood of a takeover.

Based on Bates et al. (2008) and Bauguess et al. (2009), the following logistic regression model is used to test the role of board characteristics and ownership structure of the target firm on the likelihood of takeover:

$$\text{Dependent dummy} = \text{Constant} + \beta_1 * \text{Board size} + \beta_2 * \text{Proportion of independent directors} + \beta_3 * \text{Duality} + \beta_4 * \text{Promoters' ownership} + \beta_5 * \text{Institutional ownership (non-promoter)} + \beta_6 * \text{Promoters' ownership squared} + \beta_7 * \text{Firm size} + \beta_8 * \text{Leverage} + \beta_9 * \text{M/B ratio} + \beta_{10} * \text{Firm age} + \beta_{11} * \text{BG} + \text{Year Control} + \text{Industry Control} + \text{Error}$$

Where, the dependent dummy variable takes value one if the firm is being acquired in that year, else zero. Board size is the log of the total number of board of directors. Proportion of independent directors is the percentage of independent directors in the board. Duality takes value one if the CEO and chairman are the same, else zero. Promoters' ownership is the total ownership of the promoters in the firm expressed in percentage. Institutional ownership (non-promoter) is the ownership of institutional shareholders expressed in percentage. This variable is used to control for the monitoring effect of institutional shareholders. Promoters' ownership squared is the square of promoters' ownership. Firm size is the log of asset and leverage is the ratio between debt and equity. Market-to-book (M/B) ratio is used to control for the growth opportunities available. Firm age is expressed as the number of years since its incorporation. BG is a dummy variable having value one if the firm is affiliated to any business group, else zero.

For testing the effect of board characteristics and ownership structure on the likelihood of majority acquisition among all the acquisitions, the logistic regression is used. To examine this relationship, we run regressions for the sample of all the acquisitions. The following logistic regression model is used:

$$\begin{aligned} \text{Dependent dummy} = & \text{Constant} + \beta_1 * \text{Board size} + \beta_2 * \text{Proportion of independent} \\ & \text{directors} + \beta_3 * \text{Duality} + \beta_4 * \text{Promoters' ownership} + \beta_5 * \text{Institutional ownership (non-} \\ & \text{promoter)} + \beta_6 * \text{Toehold} + \beta_7 * \text{Private Acquirer} + \beta_8 * \text{Individual Acquirer} + \\ & \beta_9 * \text{Tender offer dummy} + \beta_{10} * \text{Domestic} + \beta_{11} * \text{Related acquisition} + \beta_{12} * \text{Promoters' ownership} \\ & \text{squared} + \beta_{13} * \text{Firm size} + \beta_{14} * \text{Leverage} + \beta_{15} * \text{M/B ratio} + \beta_{16} * \text{Firm age} \\ & + \beta_{17} * \text{BG} + \text{Year Control} + \text{Industry Control} + \text{Error} \end{aligned}$$

Where, the dependent dummy variable takes value one if majority ownership is acquired, else zero. Toehold is the existing ownership of acquirer in the target firm at the time of acquisition expressed in percentage. The existing ownership of acquirer in the target firm may determine whether acquirer wants to get majority control in the target firm. It may also become easier to acquire the majority stake if the acquirer already has a substantial/large ownership in the target. Private acquirer is a dummy variable with a value one if acquiring firm is a private (unlisted) firm, else zero. Individual acquirer is a dummy variable with a value one if acquirer is an individual not company, else zero. These two variables are used to see if the type of acquirer affects the decision of whether the acquirer should acquire a majority or minority stake in the target. Tender offer dummy takes value one if acquisition was through a tender offer, else zero. Domestic is a dummy variable with a value one if acquirer is an Indian company, else zero. Related acquisition is a dummy variable with a value one if four digits SIC codes of acquirer and target are the same, else zero. All other variables are same as explained for earlier model.

Insider ownership may have either a positive, a negative or no relationship with the target firm returns in various conditions (Bauguess et al. 2009). This issue needs to be examined empirically. For analysing the effect of board characteristics and ownership on the wealth effect to target firm, we use following OLS regression.

$$\begin{aligned} \text{CAR} = & \text{Constant} + \beta_1 * \text{Board size} + \beta_2 * \text{Proportion of independent directors} + \\ & \beta_3 * \text{Duality} + \beta_4 * \text{Promoters' ownership} + \beta_5 * \text{Institutional ownership (non-promoter)} \\ & + \beta_6 * \text{Toehold} + \beta_7 * \text{Private Acquirer} + \beta_8 * \text{Individual Acquirer} + \beta_9 * \text{Tender offer} \\ & \text{dummy} + \beta_{10} * \text{Domestic} + \beta_{11} * \text{Related acquisition} + \beta_{12} * \text{Promoters' ownership} \\ & \text{squared} + \beta_{13} * \text{Firm size} + \beta_{14} * \text{Leverage} + \beta_{15} * \text{M/B ratio} + \beta_{16} * \text{Firm age} + \beta_{17} * \text{BG} + \\ & \text{Year Control} + \text{Industry Control} + \text{Error} \end{aligned}$$

Where, CAR is three day (-1 to +1) cumulative abnormal return to target firm at the time of the acquisition announcement. All the explanatory variables are same as explained earlier in the second logistics regression model.

For calculating CAR, we use one factor market model (henceforth market model) of Brown and Warner (1985):

$$R_{i,t} = \alpha_i + \beta_i * R_{m,t} + e_{i,t} \quad (1)$$

Where, $R_{i,t}$ is the daily return to security i at time t , $R_{m,t}$ is the corresponding market return, β_i is the parameter estimate for security i taken from the ordinary least squares estimates, α_i is the intercept term for security i taken from ordinary least squares estimates and $e_{i,t}$ is the error term in the regression.

The announcement day of the offer is defined as day zero in the event window period. For conducting an event study, if the announcement date falls on the day when there was no trading, the next trading day is considered as the event date (day zero). The α_i and β_i for each security are estimated using daily returns of the security and the market (BSE 100) during the estimation period of 210 days (-240 to -31 trading days with respect to announcement day). Then, using these estimated α_i and β_i for each security, daily expected return of the security in the period of -10 to +10 trading days are estimated using market return in this period. The expected return is

$$E(R_{i,t}) = \alpha_i + \beta_i * R_{m,t} \quad (2)$$

The daily abnormal return for the each security is calculated using the following equation

$$AR_{i,t} = R_{i,t} - E(R_{i,t}) \quad (3)$$

Cumulative Abnormal Return (CAR) measures the wealth effect or value creation/destruction at the time of the announcement. CAR for any event window is obtained by summing the abnormal returns for each security over the event window period. We use various alternative event windows to check the robustness of the results. Three day event window (-1 to +1 trading days), five day event window (-2 to +2 trading days), 12 day event window (-10 to +1 trading days), and 21 day event window (-10 to +10 trading days) are used.

6. Results and Discussion

Tables 1 and 2 present the results of logistic regressions. The results reported in the first table do not control for the year and industry fixed-effects while the results in the second table control for these parameters. The dependent variable is a dummy with a value one if the firm was acquired in that particular year, else zero. The results show that the board size has a positive effect on the likelihood of acquisition. It means that the companies with larger board size are more likely to be acquired. There may be more diverse views in a large board as compared to a small board. Since,

the final decision of acquisition needs to be taken by the board of directors of the company, it is important to note that the larger boards do not prohibit the acquisition. In fact, larger board enhances the chance of firm's acquisition. More importantly, the presence of more independent directors does not change the prospect of a firm getting acquired either in a positive or in a negative direction. These results are consistent after controlling for several firm specific factors, year of acquisition, and the industry of the target firm. On the other side, regressions which control for the year and industry fixed-effects show that duality decreases the chances of firm's acquisition. Duality of CEO and Chairman represents the concentration of power inside the board and consequently leads to less monitoring of the CEO by the board.

These results are significant since they provide a fresh evidence of board coordination and monitoring in a significant corporate policy decision in emerging markets. Jensen (1993) argues that the larger boards are less effective due to coordination issues and free-riding of some directors. The earlier literature finds a negative relationship between the board size and firm performance (Yermack 1996; Eisenberg et al. 1998; Mak and Kusnadi 2005). However, Coles et al. (2008) show that these finding are not consistent for all types of firms. They find a positive relationship between board size and firm performance for high R&D firms. Our results do not support the argument of coordination problems in a larger board; in fact it is other way round.

The results of effect of ownership structure illustrate that promoters' ownership has an inverted U-shaped relationship with the probability of acquisition. It means that in the first part of the relationship where promoters' ownership is lower than some critical value, an increase in promoters' ownership leads to higher chances of firm's acquisition. In other words, the firms with very low promoters' ownership are less likely to get acquired. This could be interpreted that the firms with high insider ownership are not performing well due to agency problems hence these firms are taken over. However, the results which are discussed later in this section showing relationship between the insider ownership and abnormal returns to target firms do not support this argument. The second half of the relationship exhibits that promoters are not willing to sell their shares if they have a high ownership since the selling of shares by promoters will necessarily be required at very high level of promoters' ownership.

Institutional ownership has a positive and significant effect on the likelihood of a firm getting acquired. High ownership of non-promoter institutions may reduce the agency costs between promoters and non-promoters due to monitoring effect. It may also represent less information

asymmetry for acquirers since institutional shareholders are considered more informed investors. It may also be possible that these institutional shareholders themselves are selling their shares in these acquisitions since majority of acquisitions are partial acquisitions. It is not possible to test this empirically since the data of actual sellers are not available. Among control variables, the firm size and business group affiliation has a positive impact on the likelihood of acquisition while firm age has a negative effect. These results are robust after controlling for industry and year effect.

Table 3 and 4 present the results of logistic regressions to examine the effect of majority acquisition among all the acquisitions. Board size has a negative effect on the likelihood of majority acquisition if we do not control for firm specific factors. After controlling for firm specific factors, board size and its composition do not have any effect on the likelihood of majority acquisition. The negative effect is substituted by the firm size since usually larger firms will have larger board size. The duality does not have any effect on the likelihood of majority acquisition among all the acquisitions. Interestingly, the promoters' ownership has a U-shaped relationship on the likelihood of majority acquisition. This relationship is complete contrast to the results of likelihood of an acquisition where there was an inverted U-shaped relationship. The results illustrate that the majority acquisition can happen either at a very low or high level of promoters' ownership. These results are consistent with the view that the acquirers can acquire shares from promoters only at a very high level of promoters' ownership.

The toehold (acquirer's ownership in the target before acquisition) has a positive impact on the likelihood of majority acquisition. It means that the firms are more likely to acquire majority control in the target if they already had a high ownership in the target before acquisition. Acquirers will be more confident of acquiring a majority control if they have some ownership in the target. This can be interpreted that the acquirers acquire a majority control in the target if the information asymmetry is less. It may also be easier to acquirer the majority control since the acquirer already had a significant shareholding in the target. Private and individual acquirer has a negative effect on the likelihood of majority acquisition. The public acquirer may be in a better position to acquire a majority control since they would have more resources as compared to individuals or private firms. Among other variables, the tender offer has a negative effect on the probability of majority acquisition.

Finally, we present the results for the effect of board characteristics and ownership structure on the performance of targets in table 5. The performance of targets is measured through three-day abnormal returns using market model. To our surprise, neither board size nor board composition (proportion of independent directors and duality) has any significant relationship with abnormal returns. Ownership variables (promoters and institutional ownership) also do not have any significant relationship with firm performance as measured by abnormal returns during acquisition announcement. These results are puzzling since these variables have significant effect on the likelihood of acquisition and acquisition of majority ownership. These results ask for further examination of the relationship between board structure and firm performance in emerging markets. These results are controlled for year and industry fixed-effects. However, the results do not change qualitatively without controlling for year and industry

We divide this sample further into two subsamples based on the acquisitions of majority control in the target firm. The subsample with the majority acquisition produces a negative adjusted R-square. Therefore, those results are not reported in this paper. Table 6 illustrates the results for a subsample where there is no change in the control of target due to acquisition. These results also do not have any significant relationship between board characteristics, ownership variables and target returns. However, among control variables toehold has a positive relationship with target returns. It means as existing ownership of acquirer in the target increases, market infers those better acquisitions. If an acquisition is in the same industry, the abnormal returns to targets are higher. There is more value in related industry acquisitions as compared to diversifying acquisitions.

7. Conclusions

In this paper, we examine the effect of board characteristics and ownership structure of the firm on the likelihood of its getting acquired. Further, this paper examines the effect of board characteristics and ownership structure of the firm on the likelihood of majority acquisition among all the acquisitions. This study provides an evidence of corporate governance mechanism and takeover market in an evolving regulatory framework of India. We use data of all the publicly listed companies in India during 2001 to 2011. We find that the board size and institutional ownership has a positive effect, promoters' ownership has an inverted U-shaped relationship, and the duality has a negative effect on the likelihood of acquisition. Further results show that promoters' ownership has a U-shaped relationship with the probability of majority acquisition whereas the board size and composition do not have any effect on the likelihood of

majority acquisition. There is no effect of board characteristics and ownership variables on the performance of target firms.

References

- Armour, J., J. B. Jacobs, and C. J. Milhaupt. 2011. The Evolution of Hostile Takeover Regimes in Developed and Emerging Markets: An Analytical Framework. *Harvard International Law Journal* 52:219.
- Bange, M. M., and M. A. Mazzeo. 2004. Board composition, board effectiveness, and the observed form of takeover bids. *Review of Financial Studies* 17 (4):1185-1215.
- Bates, T. W., D. A. Becher, and M. L. Lemmon. 2008. Board classification and managerial entrenchment: Evidence from the market for corporate control. *Journal of Financial Economics* 87 (3):656-677.
- Bauguess, S. W., S. B. Moeller, F. P. Schlingemann, and C. J. Zutter. 2009. Ownership structure and target returns. *Journal of Corporate Finance* 15 (1):48-65.
- Baysinger, B. D., and H. N. Butler. 1985. Corporate governance and the board of directors: Performance effects of changes in board composition. *JL Econ. & Org.* 1:101.
- Berle, A. A., and G. G. C. Means. 1932. *The modern corporation and private property*: Harcourt, Brace and World, New York.
- Bhagat, S., S. Malhotra, and P. Zhu. 2011. Emerging country cross-border acquisitions: Characteristics, acquirer returns and cross-sectional determinants. *Emerging Markets Review* 12 (3):250-271.
- Black, B., and W. Kim. 2012. The effect of board structure on firm value: A multiple identification strategies approach using Korean data. *Journal of Financial Economics* 104 (1):203-226.
- Black, B. S., H. Jang, and W. Kim. 2006. Does corporate governance predict firms' market values? Evidence from Korea. *Journal of Law, Economics, and Organization* 22 (2):366-413.
- Black, B. S., and V. S. Khanna. 2007. Can Corporate Governance Reforms Increase Firm Market Values? Event Study Evidence from India. *Journal of Empirical Legal Studies* 4 (4):749-796.
- Bris, A., and C. Cabolis. 2008. The value of investor protection: Firm evidence from cross-border mergers. *Review of Financial Studies* 21 (2):605-648.
- Chakrabarti, R., W. Megginson, and P. K. Yadav. 2008. Corporate governance in India. *Journal of Applied Corporate Finance* 20 (1):59-72.
- Cho, M.-H. 1998. Ownership structure, investment, and the corporate value: an empirical analysis. *Journal of Financial Economics* 47 (1):103-121.
- Claessens, S., and B. B. Yurtoglu. 2013. Corporate governance in emerging markets: A survey. *Emerging Markets Review* 15:1-33.
- Coles, J. L., N. D. Daniel, and L. Naveen. 2008. Boards: Does one size fit all? *Journal of Financial Economics* 87 (2):329-356.
- Demsetz, H. 1983. Structure of Ownership and the Theory of the Firm, The. *JL & Econ.* 26:375.
- Demsetz, H., and K. Lehn. 1985. The structure of corporate ownership: Causes and consequences. *The Journal of Political Economy* 93 (6):1155-1177.
- Demsetz, H., and B. Villalonga. 2001. Ownership structure and corporate performance. *Journal of Corporate Finance* 7 (3):209-233.
- Eisenberg, T., S. Sundgren, and M. T. Wells. 1998. Larger board size and decreasing firm value in small firms. *Journal of Financial Economics* 48 (1):35-54.

- Ferreira, M. A., M. Massa, and P. Matos. 2009. Shareholders at the gate? Institutional investors and cross-border mergers and acquisitions. *Review of Financial Studies*:hhp070.
- Gugler, K., D. C. Mueller, and B. B. Yurtoglu. 2008. Insider ownership, ownership concentration and investment performance: An international comparison. *Journal of Corporate Finance* 14 (5):688-705.
- Hermalin, B. E., and M. S. Weisbach. 2001. Boards of directors as an endogenously determined institution: A survey of the economic literature: National Bureau of Economic Research.
- Jensen, M. C. 1993. The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance* 48 (3):831-880.
- Jensen, M. C., and W. H. Meckling. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3 (4):305-360.
- Jensen, M. C., and R. S. Ruback. 1983. The market for corporate control. *Journal of Financial Economics* 11 (1-4):5-50.
- Mak, Y. T., and Y. Kusnadi. 2005. Size really matters: Further evidence on the negative relationship between board size and firm value. *Pacific-Basin Finance Journal* 13 (3):301-318.
- Manne, H. G. 1965. Mergers and the market for corporate control. *The Journal of Political Economy* 73 (2):110-120.
- Mathew, S. J. 2007. Hostile Takeovers in India: New Prospects, Challenges, and Regulatory Opportunities. *Columbia Business Law Review* 2007 (3):800-843.
- McConnell, J. J., and H. Servaes. 1990. Additional evidence on equity ownership and corporate value. *Journal of Financial Economics* 27 (2):595-612.
- Moeller, T. 2005. Let's make a deal! How shareholder control impacts merger payoffs. *Journal of Financial Economics* 76 (1):167-190.
- Morck, R., A. Shleifer, and R. W. Vishny. 1988. Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics* 20:293-315.
- Pant, M., and M. Pattanayak. 2007. Insider ownership and firm value: evidence from Indian corporate sector. *Economic and Political Weekly*:1459-1467.
- Sarkar, J. 2011. Ownership and Corporate Governance in Indian Firms. In *Corporate Governance- An Emerging Scenario*, edited by N. B. D. M. Satwalekar: National Stock Exchange of India, 152-189.
- Sarkar, J., and S. Sarkar. 2000. Large shareholder activism in corporate governance in developing countries: Evidence from India. *International Review of Finance* 1 (3):161-194.
- Selarka, E. 2005. Ownership concentration and firm value: A study from the Indian corporate sector. *Emerging Markets Finance and Trade* 41 (6):83-108.
- Shleifer, A., and R. W. Vishny. 1986. Large shareholders and corporate control. *The Journal of Political Economy* 94 (3):461.
- Short, H., and K. Keasey. 1999. Managerial Ownership and the Performance of Firms: Evidence from the UK. *Journal of Corporate Finance* 5 (1):79-101.
- Song, M. H., and R. A. Walkling. 1993. The impact of managerial ownership on acquisition attempts and target shareholder wealth. *Journal of Financial and Quantitative Analysis* 28 (04):439-457.
- Stulz, R. 1988. Managerial control of voting rights: Financing policies and the market for corporate control. *Journal of Financial Economics* 20:25-54.
- Stulz, R. M., R. A. Walkling, and M. H. Song. 1990. The distribution of target ownership and the division of gains in successful takeovers. *The Journal of Finance* 45 (3):817-833.

- Thomsen, S., and T. Pedersen. 2000. Ownership structure and economic performance in the largest European companies. *Strategic Management Journal* 21 (6):689-705.
- Villalonga, B., and R. Amit. 2006. How do family ownership, control and management affect firm value? *Journal of Financial Economics* 80 (2):385-417.
- Yermack, D. 1996. Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* 40 (2):185-211.

Table 1 Probability of Acquisition Results without Year and Industry Control

This table reports the logistic regression results for the probability of acquisition without controlling for the fixed-effects of year and industry. The dependent dummy variable takes value one if the firm is being acquired in that year, else zero. Board size is the log of the total number of board of directors. Proportion of independent directors is the percentage of independent directors in the board. Duality takes value one if the CEO and chairman are the same, else zero. Promoters' ownership is the total ownership of the promoters in the firm expressed in percentage. Institutional ownership (non-promoter) is the ownership of institutional shareholders expressed in percentage. Promoters' ownership squared is the square of promoters' ownership. Firm size is the log of asset and leverage is the ratio between debt and equity. Market-to-book (M/B) ratio is the ratio between market value and book value of firm. Firm age is expressed as the number of years since its incorporation. BG is a dummy variable having value one if the firm is affiliated to any business group, else zero. The t-statistic is reported in the bracket just below the regression coefficients. ***, **, and * represent the statistical significance at one percent, five percent, and ten percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-4.2428*** (-27.2056)	-4.4911*** (-26.5463)	-4.3160*** (-24.7367)	-4.6097*** (-24.3326)
Board size	0.0876*** (9.3320)	0.0891*** (9.4313)	0.0735*** (6.6350)	0.0721*** (6.4712)
Proportion of independent directors	-0.0927 (-0.4470)	-0.1233 (-0.5865)	-0.0954 (-0.4559)	-0.1222 (-0.5756)
Duality	-0.0981 (-1.3680)	-0.1106 (-1.5400)	-0.0831 (-1.1454)	-0.1026 (-1.4124)
Promoters ownership	0.0039*** (2.7525)	0.0246*** (5.1739)	0.0032** (2.1948)	0.0242*** (5.0512)
Institutional ownership	0.0265*** (10.9437)	0.0240*** (9.5864)	0.0228*** (8.0263)	0.0195*** (6.5670)
Promoters ownership squared		-0.0003*** (-4.5989)		-0.0003*** (-4.6427)
Firm size			0.0502** (2.3931)	0.0628*** (2.9402)
Leverage			-0.0003 (-0.2252)	-0.0003 (-0.2201)
M/B ratio			0.0009** (1.9696)	0.0009* (1.9107)
Firm age			-0.0072*** (-4.0111)	-0.0071*** (-3.9558)
BG			0.2162*** (3.0882)	0.1896*** (2.6849)
Year Control	No	No	No	No
Industry Control	No	No	No	No
Pseudo R square	0.039	0.0415	0.0427	0.0452
Prob > chi2	0.0000	0.0000	0.0000	0.0000
N	26082	26082	26082	26082

Table 2 Probability of Acquisition Results with Year and Industry Control

This table reports the logistic regression results for the probability of acquisition after controlling for the fixed-effects of year and industry. The dependent dummy variable takes value one if the firm is being acquired in that year, else zero. Board size is the log of the total number of board of directors. Proportion of independent directors is the percentage of independent directors in the board. Duality takes value one if the CEO and chairman are the same, else zero. Promoters' ownership is the total ownership of the promoters in the firm expressed in percentage. Institutional ownership (non-promoter) is the ownership of institutional shareholders expressed in percentage. Promoters' ownership squared is the square of promoters' ownership. Firm size is the log of asset and leverage is the ratio between debt and equity. Market-to-book (M/B) ratio is the ratio between market value and book value of firm. Firm age is expressed as the number of years since its incorporation. BG is a dummy variable having value one if the firm is affiliated to any business group, else zero. The t-statistic is reported in the bracket just below the regression coefficients. ***, **, and * represent the statistical significance at one percent, five percent, and ten percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-4.9490*** (-6.3155)	-5.2572*** (-6.7051)	-5.2492*** (-6.6800)	-5.6468*** (-7.1640)
Board size	0.0904*** (8.9999)	0.0927*** (9.1711)	0.0644*** (5.5319)	0.0629*** (5.3693)
Proportion of independent directors	0.0727 (0.3446)	0.0533 (0.2501)	0.0973 (0.4562)	0.0826 (0.3827)
Duality	-0.1090 (-1.4783)	-0.1246* (-1.6887)	-0.1091 (-1.4640)	-0.1335* (-1.7882)
Promoters ownership	0.0057*** (3.8906)	0.0289*** (5.8817)	0.0046*** (3.0919)	0.0297*** (6.0059)
Institutional ownership	0.0267*** (10.6690)	0.0239*** (9.2284)	0.0197*** (6.6338)	0.0154*** (4.9250)
Promoters ownership squared		-0.0003*** (-4.9904)		-0.0003*** (-5.3721)
Firm size			0.0970*** (4.2321)	0.1149*** (4.9140)
Leverage			-0.0003 (-0.2121)	-0.0002 (-0.1848)
M/B ratio			0.0009* (1.9265)	0.0008* (1.8293)
Firm age			-0.0046** (-2.4718)	-0.0044** (-2.3542)
BG			0.1643** (2.2607)	0.1330* (1.8149)
Year Control	Yes	Yes	Yes	Yes
Industry Control	Yes	Yes	Yes	Yes
Pseudo R square	0.0737	0.0767	0.0775	0.081
Prob > chi2	0.0000	0.0000	0.0000	0.0000
N	25709	25709	25709	25709

Table 3 Probability of Majority Acquisition Results without Year and Industry Control

This table reports the logistic regression results for the probability of majority acquisition without controlling for the fixed-effects of year and industry. The dependent dummy variable takes value one if the firm is acquired with change in control, else zero. Board size is the log of the total number of board of directors. Proportion of independent directors is the percentage of independent directors in the board. Duality takes value one if the CEO and chairman are the same, else zero. Promoters' ownership is the total ownership of the promoters in the firm expressed in percentage. Institutional ownership (non-promoter) is the ownership of institutional shareholders expressed in percentage. Toehold is the existing ownership of acquirer in the target firm at the time of acquisition expressed in percentage. Private acquirer is a dummy variable with a value one if acquiring firm is a private (unlisted) firm, else zero. Individual acquirer is a dummy variable with a value one if acquirer is an individual not company, else zero. Tender offer dummy takes value one if acquisition was through a tender offer, else zero. Domestic is a dummy variable with a value one if acquirer is an Indian company, else zero. Related acquisition is a dummy variable with a value one if four digits SIC codes of acquirer and target are the same, else zero. Promoters' ownership squared is the square of promoters' ownership. Firm size is the log of asset and leverage is the ratio between debt and equity. Market-to-book (M/B) ratio is the ratio between market value and book value of firm. Firm age is expressed as the number of years since its incorporation. BG is a dummy variable having value one if the firm is affiliated to any business group, else zero. The t-statistic is reported in the bracket just below the regression coefficients. ***, **, and * represent the statistical significance at one percent, five percent, and ten percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-1.6111*** (-2.6185)	-0.9879 (-1.5572)	0.3040 (0.4248)	1.1979 (1.6067)
Board size	-0.0814** (-2.3166)	-0.0828** (-2.3592)	0.0015 (0.0384)	0.0053 (0.1382)
Proportion of independent directors	0.3863 (0.5397)	0.3763 (0.5279)	-0.0831 (-0.1151)	-0.1122 (-0.1559)
Duality	-0.3875 (-1.5708)	-0.3069 (-1.2308)	-0.2221 (-0.8695)	-0.1173 (-0.4513)
Promoters ownership	0.0096* (1.8977)	-0.0371** (-2.3974)	0.0112** (2.0585)	-0.0459*** (-2.8626)
Institutional ownership	-0.0217** (-2.1924)	-0.0165* (-1.7036)	0.0006 (0.0528)	0.0063 (0.6077)
Toehold	0.0682*** (9.2959)	0.0694*** (9.3160)	0.0717*** (9.3341)	0.0735*** (9.4049)
Private acquirer	-1.1077*** (-4.7206)	-1.1020*** (-4.6407)	-1.4133*** (-5.6128)	-1.4330*** (-5.5961)
Individual acquirer	-0.5893 (-1.5663)	-0.5377 (-1.4141)	-1.1213*** (-2.7506)	-1.1251*** (-2.7057)
Tender offer dummy	-1.6128*** (-3.7974)	-1.6408*** (-3.8102)	-1.8241*** (-4.1311)	-1.8993*** (-4.2073)

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Domestic	0.5114* (1.9031)	0.5234* (1.9351)	0.4289 (1.5215)	0.4324 (1.5223)
Related acquisition	0.5079* (1.7414)	0.5803** (1.9709)	0.5298* (1.7343)	0.6018* (1.9433)
Promoters ownership squared		0.0006*** (3.1109)		0.0007*** (3.6677)
Firm size			-0.3899*** (-5.6282)	-0.4148*** (-5.8844)
Leverage			-0.0079 (-0.5287)	-0.0068 (-0.4593)
M/B ratio			-0.0016 (-0.2757)	-0.0012 (-0.2495)
Firm age			0.0079 (1.3658)	0.0086 (1.4891)
BG			0.1328 (0.5360)	0.1421 (0.5660)
Year Control	No	No	No	No
Industry Control	No	No	No	No
Pseudo R square	0.1913	0.2027	0.2364	0.2522
Prob > chi2	0.0000	0.0000	0.0000	0.0000
N	982	982	982	982

Table 4 Probability of Majority Acquisition Results with Year and Industry Control

This table reports the logistic regression results for the probability of majority acquisition after controlling for the fixed-effects of year and industry. The dependent dummy variable takes value one if the firm is acquired with change in control, else zero. Board size is the log of the total number of board of directors. Proportion of independent directors is the percentage of independent directors in the board. Duality takes value one if the CEO and chairman are the same, else zero. Promoters' ownership is the total ownership of the promoters in the firm expressed in percentage. Institutional ownership (non-promoter) is the ownership of institutional shareholders expressed in percentage. Toehold is the existing ownership of acquirer in the target firm at the time of acquisition expressed in percentage. Private acquirer is a dummy variable with a value one if acquiring firm is a private (unlisted) firm, else zero. Individual acquirer is a dummy variable with a value one if acquirer is an individual not company, else zero. Tender offer dummy takes value one if acquisition was through a tender offer, else zero. Domestic is a dummy variable with a value one if acquirer is an Indian company, else zero. Related acquisition is a dummy variable with a value one if four digits SIC codes of acquirer and target are the same, else zero. Promoters' ownership squared is the square of promoters' ownership. Firm size is the log of asset and leverage is the ratio between debt and equity. Market-to-book (M/B) ratio is the ratio between market value and book value of firm. Firm age is expressed as the number of years since its incorporation. BG is a dummy variable having value one if the firm is affiliated to any business group, else zero. The t-statistic is reported in the bracket just below the regression coefficients. ***, **, and * represent the statistical significance at one percent, five percent, and ten percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-0.3432 (-0.3623)	0.4301 (0.4324)	1.8205* (1.7366)	3.0502*** (2.7219)
Board size	-0.0865** (-2.1622)	-0.0818** (-2.0428)	0.0014 (0.0324)	0.0204 (0.4472)
Independent directors proportion	0.1848 (0.2317)	0.3098 (0.3872)	-0.2896 (-0.3558)	-0.1802 (-0.2196)
Duality	-0.2916 (-1.0950)	-0.2281 (-0.8463)	-0.1480 (-0.5319)	-0.0496 (-0.1742)
Promoters ownership	0.0104* (1.8489)	-0.0522*** (-2.9880)	0.0125** (2.0554)	-0.0690*** (-3.6666)
Institutional ownership	-0.0225** (-2.0980)	-0.0165 (-1.5965)	0.0029 (0.2495)	0.0117 (1.0040)
Toehold	0.0793*** (9.1732)	0.0816*** (9.1907)	0.0857*** (9.2661)	0.0892*** (9.3530)
Private acquirer	-1.2346*** (-4.7771)	-1.2338*** (-4.6871)	-1.6373*** (-5.7883)	-1.6622*** (-5.7441)
Individual acquirer	-0.6149 (-1.4441)	-0.5567 (-1.2780)	-1.2599*** (-2.6768)	-1.2485** (-2.5328)
Tender offer dummy	-1.5420*** (-3.3514)	-1.5570*** (-3.3269)	-1.6161*** (-3.3718)	-1.6424*** (-3.3405)

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Domestic	0.5240* (1.7865)	0.5464* (1.8437)	0.4623 (1.4868)	0.4820 (1.5236)
Related acquisition	0.4138 (1.2655)	0.4550 (1.3708)	0.3922 (1.1227)	0.4379 (1.2168)
Promoters ownership squared		0.0008*** (3.6799)		0.0010*** (4.4349)
Firm size			-0.4581*** (-5.7027)	-0.5176*** (-6.1085)
Leverage			-0.0047 (-0.2497)	-0.0035 (-0.1865)
M/B ratio			-0.0006 (-0.0731)	-0.0002 (-0.0199)
Firm age			0.0104 (1.5377)	0.0112* (1.6552)
BG			0.2088 (0.7452)	0.2736 (0.9485)
Year Control	Yes	Yes	Yes	Yes
Industry Control	Yes	Yes	Yes	Yes
Pseudo R square	0.2525	0.2698	0.3020	0.3279
Prob > chi2	0.0000	0.0000	0.0000	0.0000
N	883	883	883	883

Table 5 Target Return Results of Full Sample with Year and Industry Control

This table reports the results of the full sample for the effect of board characteristics and ownership on the target returns after controlling for the fixed-effects of year and industry. Dependent variable is three-days (-1 to +1 trading day) cumulative abnormal return (CAR) of the target firm obtained from the market model with an estimation period of 210 (-240 to -31) days. Majority acquisition is a dummy variable with a value one if acquirer acquires majority stake in the target firm. Board size is the log of the total number of board of directors. Proportion of independent directors is the percentage of independent directors in the board. Duality takes value one if the CEO and chairman are the same, else zero. Promoters' ownership is the total ownership of the promoters in the firm expressed in percentage. Institutional ownership (non-promoter) is the ownership of institutional shareholders expressed in percentage. Toehold is the existing ownership of acquirer in the target firm at the time of acquisition expressed in percentage. Private acquirer is a dummy variable with a value one if acquiring firm is a private (unlisted) firm, else zero. Individual acquirer is a dummy variable with a value one if acquirer is an individual not company, else zero. Tender offer dummy takes value one if acquisition was through a tender offer, else zero. Domestic is a dummy variable with a value one if acquirer is an Indian company, else zero. Related acquisition is a dummy variable with a value one if four digits SIC codes of acquirer and target are the same, else zero. Promoters' ownership squared is the square of promoters' ownership. Firm size is the log of asset and leverage is the ratio between debt and equity. Market-to-book (M/B) ratio is the ratio between market value and book value of firm. Firm age is expressed as the number of years since its incorporation. BG is a dummy variable having value one if the firm is affiliated to any business group, else zero. The t-statistic is reported in the bracket just below the regression coefficients. ***, **, and * represent the statistical significance at one percent, five percent, and ten percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-3.9368 (-0.5483)	-4.1902 (-0.5814)	-1.9189 (-0.2625)	-2.1461 (-0.2920)
Majority acquisition	1.0043 (1.0071)	1.0156 (1.0175)	0.7290 (0.7167)	0.7442 (0.7305)
Board size	-0.0229 (-0.2155)	-0.0222 (-0.2086)	0.0281 (0.2497)	0.0278 (0.2466)
Proportion of independent directors	0.3703 (0.1611)	0.3759 (0.1634)	-0.0120 (-0.0052)	0.0001 (0.0000)
Duality	-0.0465 (-0.0628)	-0.0798 (-0.1072)	-0.0510 (-0.0683)	-0.0785 (-0.1043)
Promoters ownership	-0.0134 (-0.7454)	0.0102 (0.1792)	-0.0089 (-0.4853)	0.0081 (0.1402)
Institutional ownership	-0.0349 (-1.3762)	-0.0355 (-1.3989)	-0.0129 (-0.4409)	-0.0137 (-0.4672)
Toehold	0.0218 (1.1433)	0.0226 (1.1790)	0.0227 (1.1777)	0.0232 (1.2009)
Private acquirer	-1.6480** (-2.3007)	-1.6549** (-2.3087)	-1.8946*** (-2.5943)	-1.8960*** (-2.5949)

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Individual acquirer	1.9520 (1.4593)	1.9196 (1.4322)	1.4456 (1.0636)	1.4280 (1.0492)
Tender offer dummy	2.5737** (2.2889)	2.5713** (2.2857)	2.3804** (2.1077)	2.3800** (2.1062)
Domestic	-1.0827 (-1.4177)	-1.0910 (-1.4274)	-1.0743 (-1.3835)	-1.0754 (-1.3842)
Related acquisition	1.3790 (1.2733)	1.3558 (1.2499)	1.4728 (1.3540)	1.4520 (1.3317)
Promoters ownership squared		-0.0003 (-0.4367)		-0.0002 (-0.3111)
Firm size			-0.3234 (-1.3506)	-0.3150 (-1.3065)
Leverage			-0.0355 (-1.2339)	-0.0355 (-1.2342)
M/B ratio			0.0055 (1.0472)	0.0055 (1.0462)
Firm age			0.0078 (0.4312)	0.0075 (0.4158)
BG			-0.4704 (-0.6462)	-0.4851 (-0.6647)
Year Control	Yes	Yes	Yes	Yes
Industry Control	Yes	Yes	Yes	Yes
Adjusted R-squared	0.040	0.039	0.040	0.039
N	956	956	956	956

Table 6 Target Return Results of Subsample with Year and Industry Control

This table reports the results of the subsample of non-majority acquisitions for the effect of board characteristics and ownership on the target returns after controlling for the fixed-effects of year and industry. Dependent variable is three-days (-1 to +1 trading day) cumulative abnormal return (CAR) of the target firm obtained from the market model with an estimation period of 210 (-240 to -31) days. Board size is the log of the total number of board of directors. Proportion of independent directors is the percentage of independent directors in the board. Duality takes value one if the CEO and chairman are the same, else zero. Promoters' ownership is the total ownership of the promoters in the firm expressed in percentage. Institutional ownership (non-promoter) is the ownership of institutional shareholders expressed in percentage. Toehold is the existing ownership of acquirer in the target firm at the time of acquisition expressed in percentage. Private acquirer is a dummy variable with a value one if acquiring firm is a private (unlisted) firm, else zero. Individual acquirer is a dummy variable with a value one if acquirer is an individual not company, else zero. Tender offer dummy takes value one if acquisition was through a tender offer, else zero. Domestic is a dummy variable with a value one if acquirer is an Indian company, else zero. Related acquisition is a dummy variable with a value one if four digits SIC codes of acquirer and target are the same, else zero. Promoters' ownership squared is the square of promoters' ownership. Firm size is the log of asset and leverage is the ratio between debt and equity. Market-to-book (M/B) ratio is the ratio between market value and book value of firm. Firm age is expressed as the number of years since its incorporation. BG is a dummy variable having value one if the firm is affiliated to any business group, else zero. The t-statistic is reported in the bracket just below the regression coefficients. ***, **, and * represent the statistical significance at one percent, five percent, and ten percent levels, respectively.

	(1)	(2)	(3)	(4)
Intercept	-4.4376 (-0.6267)	-4.5081 (-0.6339)	-3.3808 (-0.4667)	-3.4621 (-0.4747)
Board size	-0.0130 (-0.1168)	-0.0125 (-0.1121)	0.0124 (0.1049)	0.0126 (0.1061)
Proportion of independent directors	1.5353 (0.6467)	1.5376 (0.6472)	1.1987 (0.5006)	1.2043 (0.5024)
Duality	0.1523 (0.1984)	0.1420 (0.1835)	0.0919 (0.1186)	0.0812 (0.1038)
Promoters ownership	-0.0243 (-1.2856)	-0.0179 (-0.2983)	-0.0211 (-1.0935)	-0.0153 (-0.2531)
Institutional ownership	-0.0404 (-1.5315)	-0.0407 (-1.5348)	-0.0276 (-0.8937)	-0.0280 (-0.8989)
Toehold	0.0404* (1.9622)	0.0406* (1.9616)	0.0403* (1.9488)	0.0405* (1.9468)
Private acquirer	-1.4188* (-1.8868)	-1.4216* (-1.8883)	-1.5400** (-2.0157)	-1.5414** (-2.0159)
Individual acquirer	3.1291** (2.2210)	3.1196** (2.2089)	2.7735* (1.9398)	2.7667* (1.9316)

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Tender offer dummy	2.2415* (1.9256)	2.2380* (1.9207)	2.1126* (1.8076)	2.1098* (1.8035)
Domestic	-1.1062 (-1.3859)	-1.1097 (-1.3885)	-1.0764 (-1.3241)	-1.0774 (-1.3243)
Related acquisition	2.3760** (2.0239)	2.3699** (2.0152)	2.4129** (2.0476)	2.4060** (2.0372)
Promoters ownership squared		-0.0001 (-0.1140)		-0.0001 (-0.1010)
Firm size			-0.1422 (-0.5593)	-0.1390 (-0.5421)
Leverage			-0.0347 (-1.2241)	-0.0347 (-1.2240)
M/B ratio			0.0056 (1.0834)	0.0056 (1.0822)
Firm age			0.0036 (0.1876)	0.0035 (0.1841)
BG			-0.5691 (-0.7493)	-0.5762 (-0.7550)
Year Control	Yes	Yes	Yes	Yes
Industry Control	Yes	Yes	Yes	Yes
Adjusted R-squared	0.061	0.059	0.059	0.058
N	844	844	844	844