

Bidder Returns and Corporate Governance: Evidence from China's domestic Acquisitions and Mergers

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This study examines how corporate governance influences short-term and long-term bidder returns from China's domestic mergers and acquisitions during 2007-2016. Our initial results from events analyses show that market responses differ in ways which suggest a difference in how the market's assessment of share price from the perspectives of short run and long run. Our long-term regression analyses show that the positive impact of executive ownership remains. Independent directors record a negative effect on abnormal returns. Nevertheless, board independence measured by the composite corporate governance index exerts a significant, positive effect on shareholder wealth.

INTRODUCTION

Mergers and acquisitions (M&As) is one of the most thoroughly and extensively researched topics in finance due to its profound implications for wealth on the part of all parties involved. Research evidence suggests that target firm shareholders earn positive and significant returns around announcement date while bidder firm shareholders obtain at best negligible positive, zero or negative returns (Sudarsanam and Mahate, 2013). Fuller et al. (2002) associate positive returns to the resulting combination with the transfer of wealth from bidders to targets. There is, however, no evidence to suggest that M&As create value for shareholders in the long run (Sudarsanam and Mahate, 2006).

The agency cost hypothesis posits that M&A deals do not create corporate value if monitoring mechanism invokes disciplinary inefficiency over managerial discretionary behaviour. Some studies provide supportive evidence that the effective corporate governance structure incentivizes managers to eschew value-destroying M&A deals (Jong et al., 2007). Weak corporate governance mechanisms encourage managers to expropriate firm resources to maximize their utility by engaging in value-destroying M&A deals (Hagendorff et al., 2007). Despite of these recent advances in literature, research evidence on the impact of corporate governance on bidding firms' returns remain limited and sometimes inconclusive (Brewers III et al., 2014).

It is in this context that the present study seeks to examine the impact of corporate governance mechanisms on bidder abnormal returns. This study examines shareholders wealth effects and the role of corporate governance in the M&A decisions in an emerging economy: China. China is a special case for an investigation of this relation due to its increasingly active M&A activities and unique market characteristics (Kakabadse et al., 2010). Unprecedented economic growth and the promulgation of the corporate law in the early 1990s have resulted in rapid development of financial markets and phenomenal growth of M&A activities. A report by Baird and Company (2012) shows that from the year 2001 to

2009, China's M&A increased at the speed of 20.5% compounded annual growth rate. The report also shows that in 2010 domestic M&A deals rose by 12% over 2009, reflecting healthy economic fundamentals and a slightly larger risk appetite among bidders. Despite the rapid growth and the importance of M&A activities in the real economy, there has been a dearth in literature on the M&A market in China.

Most of earlier work concentrates on mature markets where there is diffused share ownership and the conflict of interest is mainly between managers and the widely dispersed and weak shareholders. Ownership structure in China, however, is characterized by ownership concentration in a few large hands. In 2008, of the 1,604 listed firms on Shanghai and Shenzhen Stock Exchanges, the top five shareholders controlled about 51% of the total outstanding share (Liang and Useem, 2009). The conflict of interest is dominantly between the controlling shareholders and minority shareholders, which often lead to expropriation of minority shareholders by means of investing corporate resources in projects that maximize majority shareholders' interests.

Another unique characteristic of the China's market is that state ownership dominates shareholding in listed firms. This problem has evolved from the planned economy principles where the state once wholly owned and controlled most of the business enterprises. Additionally, most of senior managers come from state-owned enterprises with almost two-thirds of the directors appointed directly and indirectly by the state (Liang and Useem, 2009). Thus, decisions of management and board of directors will represent the interests of the controlling and large shareholders who appoint them (Firth et al., 2015). Accordingly, there is a very small presence of private investors. Chen et al. (2009) find that at the end of 2004, management, foreign and employee share ownership represented less than 2% of listed firms' outstanding shares.

Political contentedness also plays a pivotal role in influencing M&A activities. Contentedness in China is mainly due to what Faccio (2016) calls explicit relationship between firms and politicians. The involvement of the state as both regulator and player stifles competition leading to weak market for corporate control and board structures. Managers do not feel compelled to maximize shareholder value but maximize social welfare. The independence of independent directors becomes questionable. Huyghebaert and Wang (2010) argue that the appointment of independent directors is only a window dressing exercise to comply with the law. Zhou et al. (2012) note that politically connected firms get government support to acquire target firms in industries under state control. Politically connected firms may also enjoy favourable financial support provided by the four largest state-owned banks in the form of privileged bank loans and subsidies.

By examining 1921 successful M&A deals between 2007 and 2016, we find that on average shareholders of bidder firms gain positive abnormal returns within five days around the announcement date but later suffer wealth losses for two years following the deals are completed. Further, we examine how the corporate governance mechanisms present in the firm before the announcement influences the reaction of the market to the M&A announcement. Our results show that the market responds favourably to the announcement made by firms where executives own shares supporting the agency argument that appropriate incentives for managers can reduce agency problems associated with M&A activities. The announcement associated with firms where the state own shares generate negative excess returns consistent with the widely held view that state ownership destroys corporate value. We, however, find little evidence to suggest that legal person ownership is associated with significant value effects in the context of China. This may be due to a lack of political contentedness and experiences in M&A deals. When we look at the long-term impact of corporate governance measures on abnormal returns, we find that relationship changes over time. However, executive share ownership continues to exert a significant positive influence on the bidder abnormal returns. Additionally, we find board independence significantly negatively related to bidder abnormal returns. This result indicates that appointment of independent

directors is only for compliance with the guidelines and less for effective monitoring of management. These results still hold after we control for a range of variables representing firm and deal characteristics.

This study contributes to the existing literature on M&As in three aspects. We extensively examine the impact of corporate governance structure on market performance of bidding firms both around the announcement date and after the completion of M&A deals. Prior studies on the factors that influence bidder returns in China concentrate on a narrow range of corporate governance variables such as state and legal shares (Chi *et al.*, 2011; Pukthuanthong-Le and Visaltanachoti, 2009). This study incorporates a wider range of corporate governance variables which enable us to make more generalized inferences of our findings. The Chinese Communist government has instituted market and corporate governance reforms since 1978 and it is imperative that these reforms need evaluation to see whether they have reinforced corporate governance and market efficiency.

The rest of this paper is structured as follows. Section 2 reviews literature on shareholder wealth effects and corporate governance mechanisms, as well as develops the hypotheses for this study. Section 3 discusses methodological issues. Section 4 discusses empirical results. Section 5 contains the conclusions and policy implications.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Wealth effects around M&A announcement date

Evidence from prior studies suggest that target firm shareholders obtain significant positive cumulative abnormal returns around M&A announcement date (see e.g. Campa and Hernando, 2004; Ward and Jong-In, 2002; Bruner, 2002; Servaes, 1991; Healy *et al.*, 1992). However, empirical findings for bidders are mixed and inconclusive. Bidders in general experience negative cumulative abnormal returns (see e.g. Swannstrom, 2006; Bauguess and Stegemoller, 2008, Cosh *et al.*, 2006, Byrd and Hickman, 1992) although some prior studies find slightly positive cumulative abnormal returns to bidders (see e.g. Masulis *et al.*, 2007; Jong *et al.*, 2007; Datta *et al.*, 2001; Ben-Amar and Andre, 2006). Some studies consider the combined return for the bidder and target firms. In a review of six studies Campa and Hernando (2004) find that in almost all the studies, the combined return for bidder and target firms is positive. This finding indicates that negative returns to bidders may be an indication of wealth transfer from bidders to targets (Fuller *et al.*, 2002).

Most research on M&A in China is limited and inconclusive or is based on small sample size. Li and Chen (2002) find positive returns for bidder firms, which they attribute to state intervention in the process and the private firm liquidity discount. Similarly, Zhang and Wang (2006) report positive earnings for bidder firms and attribute that to insider trading and the fact that M&A transactions were still a new phenomenon in China. Again, Song *et al.* (2008) record positive and significant returns around announcement date from a study of 23 acquisitions announced between 1998 and 2007. Chi *et al.* (2011) examine the performance and characteristics of bidding firms on 1148 Chinese acquisitions from 1998 to 2003, and find positive abnormal returns of 0.27% over a three-day event window. Chi *et al.* (2011) research also highlights that the political advantages of bidding firms have a significantly positive impact on the bidders' performance, while the economic advantages do not. By contrast, Zhang (2003) find negative returns and conclude that hubris and agency hypotheses explain why bidding companies lose value. Given that the Chinese government is heavily involved in the M&A process as both owner and regulator and the private firm liquidity discount, it is hypothesised, in its null form, that:

H1.1: Bidder abnormal return around M&A announcement date are positive and significant.

Wealth effects post-M&A

Recent research studies on stock performance following M&A announcement record either insignificant or negative abnormal returns in the long-term for bidders (Tuch and O'Sullivan, 2007). In a

review of five studies on stock performance a year after a successful M&A, Jensen and Ruback (1983) show that in four of the studies bidders obtain negative abnormal returns. Agrawal and Jaffe (2000) conduct a comprehensive review of twenty-two studies and confirm that indeed bidder firm shareholders lose value in the long-term after a successful M&A. In another review, Tuch and O'Sullivan (2007) conclude, "the overwhelming consensus is that shareholders in bidding companies suffer significant wealth losses when long-run returns are considered" (p. 148).

There are no agreed explanations for the negative abnormal returns in the long-term leading. In their review of long-term stock performance, Jensen and Ruback (1983) point out, "explanation of these post-event negative abnormal returns is currently an unsettled issue" (p.22). One notable development over the years was the constant criticism levelled against methodologies applied in measuring long-term abnormal returns by notable researchers Kothari and Warner (1997), Barber and Lyon (1997) and Lyon *et al.* (1999). However, none of the new developed methodologies is free from criticism. Twenty years on, what has become clear is that application of different methodologies result in different findings and that the testing process becomes a one over choice of econometric model to use rather than being simply a direct test of the study at hand (Black *et al.* 2011). For example, Sudarsanam and Mahate (2006) use the BHAR method and match their sample portfolio with market-adjusted returns, size adjusted returns and, size and market-to-book value of equity ratio adjusted returns. Using a sample of 519 successful UK takeovers completed between 1983 and 1995, three benchmark models record negative and significant but different abnormal returns. The market adjusted benchmark model record abnormal returns of -7.94% while size and, size and market-to-book value ratio adjusted BHAR record almost similar abnormal returns of -14.10% and -14.02% respectively. According to Loughran and Ritter (2000), the differences are expected due to the differences in powers of detecting abnormal returns performance yielded by different methodologies. Similar results are shared by Bouwman *et al.* (2009) and, Dutta and Jog (2009).

In one of the few studies on long-term M&A wealth effects in China, Zhou *et al.* (2012) examine the influence of state ownership with particular reference to political connections on M&A. Using a sample of 811 successful M&A deals between 1994 and 2008 and applying 24 months BHAR methodology, Zhou *et al.* (2012) find that bidder firms earn positive and significant abnormal returns of 23.36% at 1% level. They also find that SOEs (24.59%) outperform private owned firms (16.91%) in terms of long-term market performance over the 24 months event window. The results indicate that political connections of SOEs to the state through the appointment of managers and directors, as well as being the regulator, enable them to obtain lucrative deals at no premium.

Boateng and Bi (2010) examine the effect of the method payment on bidder returns in the long-term for a sample of 1267 announced deals between 1998 and 2008. Using size and book-to-market value of equity adjusted BHAR, they find that bidders obtain positive and significant abnormal returns of 5.15%. Similarly, Chi *et al.* (2011) find that bidder firms obtain positive and significant abnormal returns (BHAR = 5.3% and CAPM = 6.2%). They also find that the performance was stronger in the six months before M&A than the six months after announcement, which they attribute to leakage of information and insider trading. Chi *et al.* (2011) conclude that the positive abnormal returns may be the result of low M&A competition (there is usually one bidder for a target) and that political connections play a pivotal role in value creation. Alexandridis *et al.* (2010) and Zhou *et al.* (2012) share this conclusion.

However, Black *et al.* (2011) using a sample of 415 domestic M&A announced by Chinese listed firms between 2000 and 2009 find that bidders lose a significant -7.98% over twenty-four months following the announcement. They use bootstrapped skewness adjusted t-tests to avoid bias in the measurement of abnormal returns. Given the overwhelming international evidence that bidders lose value in the long-term and Black *et al.*'s (2011) findings for China, it is hypothesised, in its null form, that:

H1.2: Bidder abnormal returns post-M&A announcement date are negative and significant.

Corporate governance and bidder returns

A number of studies have tested corporate governance mechanisms within the M&A context. Previous research highlights the importance of the ownership structure in determining bidder abnormal returns around M&A announcement (Shim and Okamuro, 2011). Specifically, Megginson and Netter (2007) note that state ownership has an impact on firm performance especially in emerging countries. The association between state ownership and investment decisions is generally not sufficiently explored and particularly in China. There are studies that criticize state ownership of firms because of political intervention and the need to help achieve government objectives instead of profitability (Sun and Tong, 2003; Wei *et al.*, 2005). However, Chen *et al.* (2009) findings support Stiglitz (1999) results that market-oriented state shareholders may be the most suitable controlling owners of firms in countries with weak institutional environments. Similarly, Sun *et al.* (2002) argue that state ownership has positive impacts such as positive signaling, effective monitoring of management and providing business connections. The study by Pukthuanthong-Le and Visaltanachoti (2009) on Chinese firms finds a positive relationship between concentrated ownership and bidder abnormal returns. Additionally, Chi *et al.* (2011) suggest that state ownership is not necessarily associated with negative bidder abnormal returns. Zhou *et al.* (2012) in an examination of the role of state ownership in mergers and acquisitions by analyzing the short-term and long-term performance of Chinese state-owned enterprise (SOE) bidders relative to privately owned enterprise (POE) peers from 1994 to 2008 find that SOEs outperform POEs in terms of long-run stock performance. The results suggest that the gains from government intervention outweigh the inefficiency of state ownership in China's M&A. Given that state ownership has been associated with neglecting profitability objectives in favour of social objectives, it is hypothesized stated in its null form, that:

H2.1: There is a significant and negative relationship between state ownership and bidder returns around M&A announcement.

Another group of dominant owners in China is the legal person, whose shares are owned by legal entities or another company or institution with a legal entity status. This is the second largest ownership type in Chinese listed firms. Legal person shareholders have a relatively large part of cash flow rights, which gives them more incentive and interest in monitoring and controlling managers (Tan, 2002). In general, legal person have a close relationship with management and have access to corporate inside information (Xu and Wang, 1999). This helps reduce information asymmetry and ensure better monitoring of management. This group of shareholders tend to be economically motivated. Legal-person ownership is a unique type of ownership in China and is of particular interest in that it combines the merits of both institutional investor shareholding in the developed countries and state shareholding characterized in China. Ahn *et al.* (2010) in a study of 1069 US acquisitions between 1998 and 2003, find a positive relationship between institutional ownership and bidder announcement returns. However, other studies find a negative relationship. Cosh *et al.* (2006) find that institutional shareholders have a negative effect on bidder announcement returns in a study of UK takeovers between 1985 and 1996. In China, most studies find a positive relationship between legal person shareholding and firm performance (Xu and Wang, 1999; Sun *et al.*, 2002). However, Chi *et al.* (2011) in a M&A context study on Chinese listed firms report a negative relationship between bidder announcement and legal person ownership. Given the evidence from Xu and Wang (1999) and Sun *et al.* (2002) in the Chinese context, it seems reasonable, in spite of the mixed results on the relationships between legal person ownership and firm performance, to hypothesize, stated in its null form, that:

H2.2: There is a significant and positive relationship between legal person ownership and bidder announcement returns.

Board size is considered one of the possible factors affecting board-monitoring quality (Lipton and Lorsch, 1992; Jensen, 1993). According to the resource dependency hypothesis, larger boards may increase the pool of knowledge available, while the agency theory posits that larger boards give rise to

conflict and coordination problems among members (Belkhir, 2009; Cheng, 2008; Coles *et al.*, 2008). Empirical evidence mainly from the US, UK and other developed markets are mixed and inconclusive (see e.g. Swanstrom, 2006; Bauguess and Stegemoller, 2008; Ahn *et al.*, 2011; Levi *et al.*, 2008; Kroll *et al.*, 2008; Masulis *et al.*, 2007; Cosh *et al.*, 2006). Previous findings suggest that there is a relationship between board size and bidder returns but the contradictory evidence suggests that the direction and extent of the relationship is uncertain. Evidence on China is not conclusive either. Using general corporate governance and firm performance empirical research in China, Liang and Li (1999) and Li and Noughton (2007), find that board size has no effect on firm performance. This may be explained by the fact that when it became a requirement that one thirds of board members must be independent, firms simply added more directors to the already existing numbers. Another explanation is that most of the Chinese listed firms are large-sized former SOEs involved in energy, resources and other key industries (Liao *et al.*, 2009). These large-sized listed firms need more advice and expertise, compared with small firms (Liao *et al.*, 2009) and as a result larger boards which according to Yermack (1996) have no relationship with performance. The complex nature of Chinese firms calls for more directors on their boards. Therefore, it is hypothesized, stated in its null form, that:

H3.1: There is a significant and positive relationship between board size and M&A announcement return for bidding firms.

Agency theorists prefer a board dominated by independent non-executive directors. They argue that boards dominated by non-independent directors have less incentive to monitor management (Mallin, 2010). Prior research highlight that the presence of independent directors on the board of directors plays an important role in monitoring managers' decision-making process (Fama and Jensen, 1983). In support, Byrd and Hickman (1992) find that tender offer bidders are best served when outsider representation is close to 60% of the board. Additionally, Kroll *et al.* (2008) and Masulis *et al.* (2007) find similar results. Kroll *et al.* (2008) conclude that independent directors do not only monitor managerial decisions but also provide advisory services in specific events such as M&A. However, Cosh *et al.* (2006) and Levi *et al.* (2010) find a negative relationship between the ratio of independent directors on bidder's board and shareholder abnormal returns casting doubts on the independence of the independent directors. There are no direct studies on China. Existing evidence from corporate governance and firm performance is mixed (Yang *et al.*, 2011). Fan *et al.* (2007) find that independent directors play an important role in monitoring CEOs while Qui and Yao (2009) find that they do not positively affect performance because they are not independent themselves. Given the evidence from Qui and Yao (2009) in the Chinese context, it seems reasonable in spite of the mixed results on the relationship between independent directors and bidder returns to hypothesise, stated in its null form, that:

H3.2: There is a significant and positive relationship between board independence and bidder announcement returns.

Demsetz (1983) criticizes the concentration of power held by a CEO who also serves as chairperson of the board as it may compromise board independence and increase the agency problem. Studies on CEO/chairman duality and bidder announcement returns find a negative relationship. Cosh *et al.* (2006) in a study of UK firms find a negative relationship between CEO/chairman duality and abnormal acquisitions returns around announcement date. Ahn *et al.* (2010) and Masulis *et al.* (2007) study US firms and also find a negative relationship in support of the agency theory. However, stewardship theory favors role duality. Donaldson and Davis (1991) argue that role duality enhances effectiveness and produces superior returns to shareholders. Again, Vafeas and Theodorou (1988) and Bozec (2005) support the idea of the two posts being held by one person because it reduces executive remuneration and improves managerial accountability. Levi *et al.* (2008) in a study of US firms find a positive relationship between CEO/chairman duality and bidder announcement returns in support of the stewardship and resource dependency theories. Given the mixed evidence from developed economies and the high state ownership of listed firms in China, it is hypothesized, stated in its null form, that:

H3.3: There is a significant and positive relationship between CEO duality and bidder announcement returns.

Managerial incentives such as performance bonuses and perquisites play an important role in mitigating agency costs associated with M&A (Hagendorff *et al.*, 2007; Masulis *et al.*, 2007). In the context of M&A, Cosh *et al.* (2006) in a study on the impact of corporate governance characteristics on UK acquisitions provide evidence that high executive relative pay is positively related to the bidder announcement returns. Similarly, Sudarsanam and Huang (2007) find a positive relationship between the sum of salary and annual bonus and short-term shareholder gains around announcement date. These results highlight the importance of executive compensation on reducing agency conflicts (Jensen and Meckling, 1976). Generally, executive compensation in China is lower and as is expected, executive compensation in state-owned firms is lower than privately owned firms (Liang and Useem, 2009) are. Although executive compensation has risen significantly in the last decade, it is still dominated by a fixed salary rather than varying with performance (Liang and Useem, 2009). The use of stock options is limited to 1% of the firm's shares for top executive. CFA (2007) also reports that most of the listed firms in China prefer cash compensation to stock options. In a study on executive compensation and firm performance, Rui *et al.* (2002) find a significant relationship between CEO compensation and return on investment. Kato and Long (2006) find that executive compensation has a significant, positive impact on shareholder value. Given the evidence from Rui *et al.* (2002) and Kato and Long (2006) it is hypothesized, stated in its null form, that:

H4.1: There is a significant and positive relationship between executive pay and bidder announcement returns.

Managerial ownership is considered one of the most important bonding mechanisms that reward agents for principals' goals. Managerial ownership incentives such as equity ownership and stock options play an important role in mitigating agency costs associated with M&A (Hagendorff *et al.*, 2007). Evidence from prior studies highlight that share ownership by managers may be an important mechanism for aligning the interests of management with those of shareholders (Brewer III *et al.*, 2010). There are studies that provide evidence that managerial ownership has a positive effect on bidder announcement returns (e.g. Bauguess and Stegemoller, 2008; Datta *et al.*, 2005; Cosh *et al.*, 2006; Ben-Amar and Andre, 2006). This reflects greater incentives for managers to maximise value as their stakes rise. However, Jong *et al.* (2007) and Ahn *et al.* (2010) find a negative and insignificant relationship between CEO ownership and bidder announcement returns. A small number of studies have researched the impact of managerial ownership on firm performance in China. Gao and Kling (2008) find that if management ownership of shares in a firm may act as an effective governance mechanism for mitigating tunneling activities Chen (2015) and Li *et al.* (2005) report a positive relationship between managerial shareholdings and firm performance. This is consistent with Jensen and Meckling (1976). The limiting factor on the Chinese studies on managerial ownership is the small magnitude of managerial ownership and the close relationship between management and the state, which is the controlling shareholder in most of the listed firms (Yang *et al.*, 2011). Given evidence from Gao and Kling (2008), Chen (2001) and Li *et al.* (2005) it is hypothesized, stated in its null form, that:

H5.1: There is a significant and positive relationship between executive ownership and bidder announcement returns.

Control variables

Our study controls for a number of bidder specific and deal specific characteristics which are expected to influence the bidder returns. The present study draws from prior research and the limits of Chinese financial reporting, to address the potential for omitted variable bias.

Bidder characteristics

This study controls for firm specific characteristics including Tobin's q, leverage administration, transactions and size, of which are measured at the end of the year prior to the announcement date.

Tobin's q: Lang *et al.* (1991) document that shareholder abnormal returns are related to the Tobin's q ratio of the bidders firms. They assert that abnormal returns are higher for bidder firms with high Tobin's q, which is supported by previous studies (Moeller *et al.*, 2004; Jong *et al.*, 2007). However, a few of the available studies report a negative relationship between Tobin's q ratio and bidder announcement returns (Masulis *et al.*, 2007; Levi *et al.*, 2008). We therefore expect Tobin's q to have a negative effect on abnormal returns.

Leverage: Masulis *et al.* (2007) document that leverage is an important governance mechanism. They note that higher debt levels help reduce future free cash flows and therefore limit managerial discretion. Higher debt also means that managers lose control to creditors and risk losing their jobs their firms fall into distress. Masulis *et al.* (2007) report positive and significant effect on abnormal returns. Other studies record either insignificant positive or negative effect on bidder returns (Jong *et al.*, 2007; Wang and Xie, 2009). Leverage is expected to have a positive effect on abnormal returns.

Administration: Chi *et al.* (2011) argue that when M&As take place between firms from the same local government administration the returns are lower than cross local government ones. This is consistent with findings by Cheung *et al.* (2010) who find that M&A deals that involve bidder and the target falling under one administrative province have negative effects on bidder abnormal returns. We expect the administration variable to have a negative effect on abnormal returns.

Related party: Related party transactions involve the transfer of assets or liabilities between a listed firm and the legal entities or individuals who control it (Cheung *et al.*, 2010: pp. 675). Cheung *et al.* (2010) note that generally related party transactions do not create value for shareholders. We therefore expect a negative effect on abnormal returns.

Firm size: Firm size may affect both M&A activity and the propensity to engage in M&A (Goranova *et al.*, 2010). Moeller *et al.* (2004) find that managers of large bidders are prone to hubris and end up overestimating potential synergies. They document that small bidders show positive returns, while large bidders show slightly negative returns. We expect firm size to have a negative effect on abnormal returns.

Deal characteristics

The study also controls for deal characteristics including method of payment, listing status of the target firm, value of the transaction, diversifying or focusing acquisition and previous M&A experience.

Method of payment: Evidence from prior research suggest that M&A deals paid in cash signal greater commitment to an acquisition target firm than other forms of M&A finance (Hagendorff and Keasey, 2010). The use of equity to finance M&A deals sends a signal to the market that bidder firms are overvalued (Andrade *et al.*, 2014). Additionally, this might indicate information differences between managers of the bidding firm and external investors (Myers and Majluf, 1984). Empirical evidence is mixed, with some studies reporting positive cash (stock) effects while other reporting negative cash (stock) effects on abnormal returns (Swanstrom, 2006; Bauguess and Stegemoller, 2008). We therefore expect cash to have positive effects and stock to have negative effects on abnormal returns.

Target listing status: Andrade *et al.* (2001), in a review of acquisitions announced between 1973 and 1998, find that bidders for public targets experience negative returns. Fuller *et al.* (2002) find negative returns for bidders of public firms and positive returns for private firms. The explanation given is that bidder firms for private target capture a liquidity discount (*et al* 2007). We therefore expect acquisition of public targets to have negative effects on abnormal returns and private targets to have positive effects on returns.

Diversifying acquisition: Lins and Servaes (2002) point out that the agency problem may be different in well-diversified firms. Mock *et al.* (1990) find that diversifying has a negative effect on abnormal returns while Masulis *et al.* (2007) find no effect on bidders' abnormal returns. We therefore expect diversifying acquisitions to have a negative effect on abnormal returns.

Repeat bidders: Pangarkar (2000) asserts that once a firm engages in an acquisition, it develops a competency in the process of making that type of acquisition, which increases chances of engaging in another similar acquisition. This might explain why firms engage in multiple and repeat acquisitions. Recently, Kroll *et al.* (2008) assert that directors with prior acquisition experience help in making value-creating acquisitions. In light of the learning effect, we expect firms with prior acquisition experience to perform better.

Deal value: Deal value gives an indication of the size or value of the target firm. Houston and Ryngaert (1994) note that smaller deals may be easier to integrate into the context of the bidder firm and thus generate positive abnormal returns. However, large deals are undertaken solely in pursuance of managerialism behaviour associated with large firms such as greater power, higher salary, more reputation and social recognition. Uddin and Boateng (2009) in a study of UK cross boarder M&As find that deal size does not have a positive effect on the bidder firm wealth gains. We therefore expect deal size to be positively related to abnormal returns.

DATA AND METHODOLOGY

Sample selection

Our study focuses on domestic M&A deals between January 2007 and December 2016 by Chinese listed firms. The initial data set is obtained from the China Stock Market and Accounting Research (CSMAR) database. It comprises 52,916 deals. The following criteria are then used to screen the sample:

1. The bidder is a Chinese firm with Class 'A' shares traded on the Shanghai or Shenzhen Stock Exchange, while the target firm can be a listed public firm or a private firm (Cosh *et al.*, 2006).

2. The status of the deal must be successful with the deal value disclosed. To avoid the results generated by very small transactions (Fuller *et al.*, 2002), the amount paid for the target should be at least 1 million Chinese Yuan.

3. M&A involving firms in the financial industry are excluded, because they are subjected to special accounting and regulatory requirements.

4. For firms with multiple announcements, only the first announcement is considered. If the firm makes an announcement of the acquisitions of two firms on the same date, it is treated as a single acquisition.

5. The share price data for the bidder must be available for at least a year prior to and two years following the announcement of the M&A, since these stock prices are required to compute the bidder's abnormal returns.

6. Only deals announced on a trading day are included. Announcements made on a non-trading days are excluded as they may introduce noise on the share price as investors take positions before the next trading day.

To ensure that the movement in the share price is due to the M&A announcement and not to other confounding events, we controlled for confounding events by removing announcements with such events as share splits, dividend and earnings announcements, and executive changes within the event window from the sample. Our final sample comprises 1,921 M&A transactions.

Sample characteristics

Appendix 1 presents an overview of the final sample of M&A deals. Panel A shows the distribution of M&A deals by the year of announcement. The general trend that has characterized the Chinese M&A market over the last decade: increase in both the number of deals and the value of the transactions over time as indicated by rising average deal values. The number of M&A deals increased from 41 in 2007 to 254 in 2016 with a peak in 2007. The average value of M&A deals increased from CNY68 million in 2007 to CNY398 million in 2016. The increase in both number and value of transactions shows the confidence of the local market players in the Chinese M&A market.

Panel B shows the distribution of M&A deals by bidder industry. Manufacturing sector dominates M&A deals over the sample period accounting for 55.75% of the deals. The sector of unclassified firms comes second accounting for 7.08%. In terms of value, transport sector accounts for the largest deals (CNY830 million per deal on average) and information technology is second recording an average of CNY651 million per deal. Manufacturing industry records a relatively small average deal value of CNY189 million per deal. They might be three possible explanations why manufacturing industry firms dominate the M&A market in China. Firstly, this may be explained by the bandwagon theory (Lieberman and Asaba, 2015; Pangarkar, 2000), which posits that firms in manufacturing are imitating their close rivals as their managers are driven by the urge to increase the size of their firms to earn high pay and build high political profiles. Secondly, the phenomenon might be explained by the deliberate policy by the state to consolidate the highly defragmented manufacturing industry to increase international competitiveness. Thirdly, the dominance of the manufacturing industry might indicate a wave. The industry shock that manufacturing firms react to is the need for industry consolidation (Andrade *et al.*, 2015).

Panel A presents the distribution of M&A deals by method of payment. Cash payment dominates both the number of deals (90.06%) and the total value of transactions (58.84%). However, on average very large deals tend to be paid by stock or mixed payment methods. The average size of deals paid with equity was CNY1630 million and paid by a combination of methods was CNY1180 million. The average size of deals paid in cash are relatively small at CNY180 million. This is consistent with Boateng and Bi (2010) who note that bidder firms in China prefer to finance M&As by cash because they have large cash holdings and Chinese firms still prefer to deal with business transactions in cash.

Panel B presents the distribution of M&A deals by type of business. 96.77% of the announced M&A deals are negotiated. This is consistent with findings from Tuan *et al.* (2007) where the bidding firm takes over the target firm by negotiating with the major shareholders. Negotiated equity transfer accounts for 63.35% of the deals while 33.42% are negotiated asset transfer. There are 60 debt restructuring cases accounting for 3.12% and only 2 tender offer announcements accounting for 0.10%. However in terms of deal value, tender offers are conducted in the largest scale recording an average deal value of CNY886 million, which is followed by asset transfer with CNY419 million.

Panel C presents the distribution of M&A deals by type of restructuring. The afro-discussed trend is repeated in the type of restructuring. Asset acquisition accounts for 90.58% of the announced M&A deals. Asset acquisition is very popular in China mainly as a result of the political legacy that many of the private firms do not have shares and therefore the best possible acquisition option is by bidding assets whose value are easier to determine and verify. Asset stripping comes second with 3.33% closely followed by debt restructuring with 3.12%. Mergers (0.36%), asset swap (0.31%) and share repurchase (0.05%) are not very common in China. In contrast, mergers and share purchase account for the largest deals in terms of deal values with an average of CNY3990 million and CNY1990 million, respectively.

Methods

We employ the bidder abnormal returns around the announcement date and post-M&As as the dependent variables and corporate governance mechanisms as the key explanatory variables. We use bidder characteristics and deal characteristics as control variables.

Bidder abnormal returns around announcement date

Event study methodology, as suggested by Fama *et al.* (1969), further developed by Brown and Warner (1985) and employed by Uddin and Boateng (2009), is used to measure stock performance around the M&A announcement date. Event studies focus on examining the abnormal returns attributable to the event being studied by subtracting normal return from the actual return of a stock. Normal return is the return that is expected if the event had not taken place.

There are several methods of estimating normal returns identified in literature but the most widely used method is the market model (Kumar and Panneerselvam, 2009; Masulis *et al.*, 2007; Chi *et al.*, 2011). The daily abnormal return (AR) for each firm is calculated using the following:

$$AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$$

Where, AR_{it} is the abnormal return on stock i on day t , R_{it} is the daily actual or realised stock return on firm i on day t and R_{mt} is the equally-weighted market return on day t of the Shanghai or Shenzhen Stock Exchange depending upon where the bidding firm is listed. This is because there is no single composite index for both exchanges. The coefficients

α_i and β_i are ordinary least squares (OLS) estimates of the intercept and the slope. We estimate the model parameters using 200 daily return observations starting from 220 to 21 days before the M&A announcement date. This is consistent with recommendations made by Bartholdy *et al.*, (2007) that the standard estimation period is between 200 and 250 daily returns (p.228).

We construct cumulative abnormal returns (CAR) as the sum of the abnormal returns over the event window around the announcement date. Although prior studies use different event windows, the event window must be long enough to cover for the uncertainty over the exact time of publication and public dispersion of information before the event date and delayed response by the market after the event date. Additionally, the event window should not be short enough to miss some run-up returns and long enough to incorporate confounding events.

For the purposes of this study, CAR is computed over a five-day event window starting from two days before the announcement date to two days after announcement date. This period is considered sufficient to cover for the delayed response of the weak form market of China after the event date and short enough to prevent confounding events before the event date. After an analysis of CAR over different event windows (see Appendix 3: Panel A), the five day window reports the highest t-statistic value.

Test statistic is used to determine whether the abnormal returns are statistically different from zero. The statistical significance of CAR is determined following Dodd and Warner (1983) and employed by Hagendorff and Keasey (2010). Standardised abnormal returns are used to prevent AR with large variances dominating the test. The t-statistic is calculated using the following formula:

$$t = \frac{\overline{AR}_{it}}{\partial AR_{it} / \sqrt{N}}$$

Where, \overline{AR}_{it} is the sample mean and ∂AR_{it} is the cross sectional sample standard deviation.

Bidder abnormal returns post-M&A

There is evidence to indicate that long-term performance measurement is sensitive to both the methodology and the benchmark. It is also worth noting, "... the estimation of abnormal returns over long event windows is a matter of some intense debate" (Sudarsanam and Mahate 2006: pp. S15). Sudarsanam and Mahate (2006) note that although different benchmark models have been developed such as stock market, size and book to market ratio and Fama-French three and four factor models, none of them is free of the bad model problems. We follow the standard buy-and-hold abnormal return (BHAR) methodology (Barber and Lyon, 1997) to examine the long-term performance of bidding firms. We accordingly calculate the expected returns for the bidding firms by using the stock market returns as benchmark.

To calculate BHAR, firstly, the returns of the firms and benchmark returns (market returns) are compounded individually. Secondly, the difference between the returns of the bidding firms and the returns of the equally weighted market returns is calculated to derive the BHAR. BHAR is calculated for a 24-month post-acquisition period, starting with one month after the announcement date using the following formula:

$$BHAR_{it} = \prod_{t=1}^T (1 + R_{it}) - \prod_{t=1}^T (1 + R_{mt})$$

Where, R_{mt} is equally weighted stock market return R_{it} is the month return for firm i and T is the investment horizon in months.

Average BHAR for the entire sample is calculated to find out the overall performance of the sample firms over the 24-month period. The average or mean BHAR is the arithmetic average of abnormal returns in the sample of size N . Mean BHAR is calculated using the following formula:

$$\overline{BHAR}_{-24} = \frac{1}{N} \sum_{t=1}^T BHAR_{it}$$

A \overline{BHAR}_{-24} for a specific time period is interpreted as a gain in shareholder value (value creating) if it is positive and as a loss of shareholder value if it is negative (value destroying).

Sudarsanam and Mahate (2006) highlight that $BHAR^2$ are positively skewed and this problem may increase as the holding period length increases and may weaken the effect on statistical tests. To minimize the skewness problem, we draw inferences based on block bootstrapped skewness-adjusted t -statistic as recommended by Lyon *et al.* (1999).

Multivariate analysis

To explore the influence of factors on the shareholders abnormal return around announcement date, we adopt cross-sectional ordinary least squares (OLS) regression analysis with clusters. The sample of 1921 announcements is made up of 1059 firms. In other words, there were some instances where a particular firm was involved in more than one acquisition over the ten-year time horizon of this study. The returns within each firm may not be independent, and could lead to residuals that are not independent within firms. To address this potential problem, we use standard errors adjusted for heteroscedasticity and M&A transactions are clustered based on the bidder using the unique stock code provided in CSMAR database (suggested by White (1980) and used by Masulis *et al.* (2007)). While these clusters of acquisition observations may be correlated within firms, they would be independent between firms. These variance estimates are robust to any type of correlation within the observations of each firm. Stata 12.1 is used to run the cross-sectional regression model and is specified as:

$$CAR_{it(-2,+2)} = \alpha + \beta_1 \text{corporate governance} + \beta_2 \text{control variables}_{it} + \xi$$

The dependent variable $CAR_{i(-2,+2)}$ is defined as accumulate abnormal returns around the announcement period over a five-day event window using market model parameters estimated over 200-day estimation period. $BHAR_{-24}$ is defined as the mean buy-and-hold abnormal returns over the twenty-four month period calculated using the market index as the benchmark.

Corporate governance variables selected for this study and identified in previous empirical studies include state ownership, legal person ownership, board size, CEO duality, board independence, executive ownership and executive pay. State ownership is measured as the proportion of shares owned by the state and its agencies to the total number of outstanding shares in a bidding firm a year before the M&A announcement. Legal person ownership is measured as the proportion of shares owned by legal person to the total outstanding shares in a bidding firm a year before the M&A announcement. Board size is measured as the total number of directors serving on a bidding firm's board a year before the M&A announcement. CEO duality is a dummy variable equal to 1 if the bidder's CEO also serves as the Chairperson of the board a year before the M&A announcement or 0 otherwise. Board independence is a dummy variable equal to 1 if over 33% of the bidder board members are independent a year before the M&A announcement or 0 otherwise. Executive ownership is the bidder executives' percentage ownership of the bidding firm a year before the M&A announcement. Executive pay is the total salary paid to the bidder firm's top three executives including allowances and bonuses a year before the M&A announcement.

Control variables include firm specific characteristic variables such as Tobin's q, leverage, administration, related party transactions and firm size. We also control for industry variables represented by competitive industry and unique industry. Specifically, Tobin's q is measured as a ratio of a bidder's market value of assets over its book value of assets, where the market value of assets is computed as the book value of assets minus the book value of common equity plus the market value of common equity. Leverage is measured as book value of long-term debt and short-term debt divided by market value of total assets. Administration is a dummy variable equal to 1 if both the bidder and target firms fall under the same local authority administration or 0 otherwise. Firm size is defined as the log transformation of the bidder's total book value of assets.

We also control for deal specific characteristics such as listing status of the target firm, diversifying acquisitions, method of payment, the deal value and repeat bidders. Specifically, public target is a dummy variable equal to 1 if the target is listed on the stock exchange or 0 otherwise. Diversifying acquisition is a dummy variable equal to 1 for diversifying acquisition or 0 otherwise. Two methods of payment indicators are created for all cash-financed and all stock-financed deals. All cash equals to 1 when the M&A transaction is fully financed with cash or 0 otherwise. All stock equals to 1 when the M&A transaction is financed fully with stock or 0 otherwise. The deal value is measured as the log transformation of Chinese Yuan value of the M&A deal. Repeat bidder is a dummy variable equal to 1 if the bidder is engages in more than one deal or 0 otherwise. To capture the effects of the ownership status of the target firm, the target variables are interacted with the method of payment variables to create the mutually exclusive and exhaustive deal categories. To avoid the problems of multicollinearity, the dummy construction rule is applied and therefore only public target x all cash, private target x all stock and private target x all stock variables will be used in hypothesis testing.

EMPIRICAL RESULTS

Descriptive statistics

Appendix 5 presents the summary statistics of the corporate governance, bidder specific and deal specific characteristics variables. The results show some of the salient features of the Chinese board structure and composition. On average, the total number of directors in a board range from 5 to 19, the figures recommended by the Chinese Company Law guidelines. An average board size is 9.22 with a

median of 9. This reflects full compliance by the Chinese listed firms with the regulation and is consistent with prior studies (Huyghebaert and Wang, 2010). The results also show the continued downward trend in CEO/Chairman duality with 13.1% of the firms whose CEOs still hold the dual positions. Currently the CSRC requires that the number of independent directors sitting on a board should be at least 0.33 of the total number of directors. On average, the results from the sample show that 80.1% of the sample firms are complying with the regulations. By comparison, companies have a board more than half of the board to comprise of independent directors in mature markets.

The average state ownership is 28.7% and legal person is 18.9% of the total outstanding shares. The state remains the controlling shareholder, controlling about 30% and more of the outstanding shares in about 40.3% of the firms where they own shares. This is a quite significant reduction from 84% and 46.6% as reported by Qiang (2003) and Chi *et al.* (2011) at the end of 2001 and 2005 respectively. The reduction may be attributable to the share structure reform introduced in 2005. Despite of the improvement, the ownership structure of Chinese firms is still highly concentrated. Insider ownership is very small. Executive ownership is almost negligible at 0.9%. However, it is worth noting that some firms have executive shareholding at as high as 63.8%. Similarly, managerial incentives are markedly low compared to their western counterparts. On average, executives are paid CNY 819,972 per annum as fixed remuneration. The lowest paid executive receives CNY 14,000 per annum with highest being paid CNY 10,500,000.

The sample shows good performance as the average Tobin's q ratio is 2.3 which implies that the bidder firms are overvalued. The average leverage for our sample is 0.14, which is lower than 0.497 reported by Li *et al.* (2011) of and 0.24 reported by in Pukthuanthong-Le & Visaltanachoti (2009). 73.5% of the target firm and the bidder firm fall under the same local authority administration and 60.5% are related transactions. On average, the firm size measured by the total assets is CNY5 130 million with asset values ranging from between CNY120 million and CNY 108,000 million with a median of CNY 2,250 million. The sizes of the firms vary considerably as evidenced by the high standard deviation of CNY 11,000 million.

The results show that Chinese listed firms acquire 93.8% private firms in the M&A transactions and 6.2% public targets. The results are consistent with prior evidence from China (Chi *et al.*, 2011). The popularity of private targets is mainly due to their smaller size and easy victims of political bullying by state-controlled firms. About 90.1% of the M&A are conducted on the basis of cash finances transactions. This is consistent with previous studies from China that record cash as the main method of payment employed by bidding firms. Chi *et al.* (2011) record 87% cash transactions, and Tao and Fei (2010) record 80% cash transactions. Bidding firms prefer paying by cash than by stock because of its simplicity and because it allows bidding firms to avoid the complex process of issuing stock in line with the requirements of the CSRC (Chi *et al.*, 2011). Stock-financed M&A deals constitute 4.4% and other payment methods 5.5% of the method of payments.

Appendix 5 further shows 90.2% of the bidding firms engage in diversifying deals. This suggests the possibility that firms attempt to achieve risk diversion through engaging in M&A across different industries. On average, the value of the transaction is CNY 142 million with the values ranging between CNY 1.0 million (which is the selection criteria minimum cut-off value) and CNY 32,800 million and a median of CNY 38.9 million. These statistics imply that there are some very large deals. The values also vary considerably given a very high standard deviation of CNY 1,460 million. The results show that 73.0% of the M&A transactions in the sample are by repeat bidders.

Wealth effects around announcement date

Panel A of Appendix 3 shows that the bidder firms' cumulative abnormal returns during the various event windows. In the sample of 1,921 M&A announcements, bidder firms obtain positive and statistically significant CAR of 0.57% at 1% level over the 5-day event window. The results are consistent with

previous studies on China's M&A deals (Chi *et al.*, 2011; Song *et al.*, 2008; Li *et al.*, 2011; Zhang and Wang, 2006). This result indicates that bidder firms make M&A decisions that create value for the shareholders. Panel A Appendix 1 (Figure 1) shows the movement of abnormal returns for both the 5-day event window and 21-day window. The average abnormal returns (AAR) around the announcement date show a significant spike on the announcement day. From day -2 to the announcement date, the share prices record positive and significant returns. However, a downward trend is observed from day +1 and continues through to day +2. The picture becomes clearer when the event window is widened to 21 days (see Panel B). We consider three contributing reasons. First, this may explain the hubris hypothesis that bidding firms over-estimated the evaluation of take-over opportunities (Berkovitch and Narayanan, 1993). Second, this may indicate that there was no information leakage before the announcement date. If there were information leakage, share prices would have fluctuated well before the announcement date. Third, the results suggest that China's stock market is efficient as the information relating to the M&A announcement is immediately reflected in the share prices.

The positive results hold regardless of firm size, target status, bidder industry, and method of payment (see Appendix 4). Previous studies find that the size of the bidder has a significant impact on the performance of bidding firms. Contrary to our expectation that large firms make value-destroying M&A decisions, there is no significant difference in abnormal returns to bidder shareholders between small and large firms. The results for sub-samples by firm size are consistent with the result for the full sample. Our overall results are evidence to the effect that the M&A strategies for both categories create value for shareholders.

The CAR for bidder firms of unlisted (private) target is positive, so is CAR for bidders of listed (public) targets. Although the CAR for bidders of public targets is greater than CAR for bidders of private targets, the difference is not significant. Despite being in contrast to previous studies that private firm bidders earn higher returns than bidders for public targets do, our results are consistent with the possibility that the market does not have full information relating to private firms and accordingly results in lower evaluations due to liquidity discount.

Further, we compare bidder returns by the industry of the bidding firm. The results for the individual industries are consistent with the results of the full sample. Bidders earn positive returns across industries. Bidders of the manufacturing sector earn a relatively low return of 0.4% despite its dominance in terms of deal numbers. Bidders of the agriculture industry obtain the highest abnormal returns of 1.9% with the unclassified industry bidders earning the least abnormal returns of only 0.2%.

Our results uphold the signalling theory that different methods of paying for M&A deals result in different reactions from market. Bidder positive returns regardless of the payment method in M&A deals. Stock-financed M&As yield higher returns (7.0%) than those paid for in cash (0.2%). Our results are in contrast with the findings of Travlos (1989) that cash-financed M&As yield higher returns than stock-financed M&As and Andrade *et al.* (2001) that stock financed M&As yield negative returns while cash-financed M&As yield positive returns. The explanation put forward for the difference is that the use of stock signals overvaluation of the bidder. Our results, however, the M&A market in China welcomes stock transactions. Cash payments subject the bidder to adverse selection, which, in turn, results in overpayment to the target (Boateng and Bi, 2010).

Corporate governance and bidder returns around announcement date

Appendix 6 presents the cross sectional regression results of the relationship between cumulative abnormal for 5-day around the announcement date and various corporate governance and bidder and deal characteristics. We run separate regressions on the two ownership structure variables, namely state shares and legal person shares due to possibilities of multicollinearity, which may result from high correlation between the two variables as suggested by Chi *et al.* (2011). The results of these regression models are

presented in model 1 and 2. Regressions on models 3 and 4 consider the three interaction variables, namely cash- financed public targets, cash-financed private targets and stock-financed private targets.

Overall, the regression models are significant at the 1% level, and the explanatory power of the models is quite similar with adjusted R ranging from 6.3% to 6.1%. Although the R² values reported in Appendix 6 may be considered low, they are in line with literature where the number of observations is above 1500. This lends support to the conclusion drawn by DeYoung *et al.* (2009) in their study of bank mergers who conclude that the low R indicate that little is known about what impacts viable valuation gains from mergers.

The results show that corporate governance variables are statistically significant across regression models. State ownership is negatively associated with abnormal returns at the 10% level. This finding is as expected although not consistent with Chi *et al.* (2011) who report a positive state ownership effect on abnormal returns indicating that the state appears to be pre-occupied with social welfare goals at the detriment of economic goals. We conjecture that the difference between the two studies is due to share tradability during the sample period. Chi *et al.* (2011) look at M&As between 1998 and 2003 well before the share structural reform during which state-owned shares were not tradable. The current study looks at a period when state ownership was significantly reduced and most shares have now become tradable relative to the period before the share structural reform.

The proportion of executive ownership was found to be positive and significant at the 5% level across regression models. The positive coefficient indicates that bidding firms in which executives own shares make M&A decisions that increase shareholder wealth. This result is consistent with the findings of Sudarsanam and Huang (2007), and Cosh *et al.* (2006) for mature markets and Gao and Kling (2008 and *et al.* (2005) for China as well as this study's expectation. The finding the agency theory which suggests that shareholdings owned managers help in aligning their interests with those of the shareholders (Jensen and Meckling, 1976).

In line with the agency theory, legal person ownership records a positive but insignificant coefficient in all the regression models. This finding partially supports our hypothesis but is inconsistent with Chi *et al.* (2011). This indicates that legal person ownership is concerned with value maximization. Further, in partial support of the stated hypotheses of this study, board size, CEO duality, board independence record positive but insignificant coefficients. The results indicate that large boards because of varied skills they bring to the board and complex nature of the Chinese firms make M&A decisions that increase shareholder wealth.

This finding supports the resource dependency theory. Firms with a separation of CEO/Chairman role make value-creating M&A decisions. The positive relationship between board independence and M&A performance in the short run supports the widely held expectation that the presence of independent directors on the board helps in the monitoring of management and therefore ensures that they make investment decision that maximize shareholder value. The relationship is not significant because the appointment of independent directors is *de facto* a window dressing exercise to comply with the guidelines.

The results show that executive pay negative not on abnormal across the regression models. This does not support our hypothesis that there is a positive relationship between executive pay and abnormal returns. This may be due to the remuneration scheme which is yet to be an effective incentive for managers to make value enhancing M&A decisions.

Out of the five firm specific characteristics variables, coefficients on Tobin's q and firms that fall under the same local authority are statistically significant. Tobin's q records a negative effect on bidder returns at the 5% level. This finding is consistent with Masulis *et al.* (2007), indicating that firms with low growth options are not expected to make value enhancing M&A than firms with high Tobin's q. Bidder firms that fall under the same local government or province with the target firms record a negative effect on bidder returns at the 10% level. This result is consistent with findings from Chi *et al.* (2011)

who report the same effect. Leverage has a positive but not statistically significant effect on bidder returns. This indicates that management of bidding firms with a high debt level are compelled to operate effectively and efficiently to service their debt obligations. The finding is consistent with findings by Masulis *et al.* (2007) for a US sample and Pukthuanthong-Le and Visaltanachoti (2009) for a Chinese sample. Consistent with a general observation from US studies, bidder firms bidding listed targets achieve negative but not significant returns (Fuller *et al.*, 2002; Moeller *et al.*, 2004; Faccio *et al.*, 2006). The results also show that bidder size has a positive and not significant effect on bidder returns, which is contrary to the findings of Masulis *et al.* (2007). This may indicate that firm size has some power in preventing management making value destroying M&A decisions.

Turning to the deal characteristics, we find that deals paid for in cash have a significant, negative effect on bidder returns at the 5% level. By contrast, deals financed by equity have a significant, positive effect at the 1% level. The result lends support to the signalling hypothesis that different payment methods send different signals to the market. Positive stockpayment effect is consistent with findings of Faccio *et al.* (2006) but negative cash payment effect is inconsistent with findings of Chi *et al.* (2011) who report a positive effect.

Further, we partition the method of payment based on the listing status of the target firm to capture the interaction effects of target listing status and the bidder's payment-method choice. The results (regression models 3 and 4) show that the coefficient on the interaction between cash and public and private targets is negative and significant at 5% level. However, the coefficient on the interaction between stock and private targets is positive and significant at the 1% level. This indicates that bidders that use stock as a method of payment to acquire private targets create value for its shareholders, but the reverse holds for cash-financed acquisitions regardless of the listing status of the acquired firm.

Two-year post-M&A wealth effects

Panel B of Appendix 2 shows bidder firms' average abnormal returns for twelve, twenty-four and thirty-six months after the M&A announcement. On average, bidder firms earn negative returns of -11.51% twenty-four months following the announcement date. The results are consistent with prior studies on mature markets but inconsistent with previous studies on China.

The negative returns are consistent for cash, bearing liability and mixed methods of deal financing. Assets and stock financed deals maintain positive returns following M&A and as was with returns around the announcement date. These losses are also consistent for size of the bidder firm and listing status of the target firm. Both small and large firms record negative abnormal returns with large firm shareholders losing more than small firms do. Bidder firms that acquire listed or non-listed target earn negative abnormal returns with those bidding public targets losing more. An analysis of long-term abnormal returns by industry shows that ten out of the twelve bidder industry classes earn negative abnormal returns. The agriculture, retail industry and wholesale industry record positive abnormal returns. This indicates that better performing industries in the short-term continue with their good run into the long-term.

Overall, the long-term results indicate that bidder firms' shareholders lose wealth regardless of the size of the firms or the listing status of the acquired firms. Equity financed deals outperform cash financed deals in the long-term, which is consistent with Boateng and Bi's (2010) findings. This indicates that in the presence of information asymmetry, cash offers lead to poor post-acquisition performance for bidder firms. Finally, better performing industries continue their good run into the long-term.

Corporate governance and long-term stock performance

Appendix 8 presents the regression results of the relationship between buy-and-hold abnormal returns for 24 months after the announcement date and various corporate governance measures, firm specific characteristics and deal characteristics. The two ownership structure variables, state shares and legal

person shares, are analyzed separately due to potential multicollinearity, for which the results are presented in models 1 and 2. Models 3 and 4 consider the three interaction variables, namely cash-financed public targets, cash-financed private targets and stock-financed private targets.

In terms of corporate governance measures, it appears long-term abnormal returns are positively influenced by executive but influenced by board independence. This indicates that a higher executive share ownership results in better M&A decisions in support of the convergence of interest hypothesis of the theory. Contrary to our hypothesis, board independence has a significant, negative effect on abnormal returns. This indicates that boards with more than 33% independent directors do not have better insight about M&A targets Huyghebaert and Wang (2010) that the appointment of directors is a window dressing exercise in compliance with the law. In reality, the lack as most independent directors are nominated by controlling shareholders and therefore do not represent interests of the minority shareholders.

No other variables are significant and the signs have reversed compared to the short-term cross sectional regression analysis. State ownership has a positive effect on abnormal returns but loses its significance in all models while legal person ownership has a negative effect. This indicates that listed firms with state owned shares perform better in the long term than bidder firms with legal person owned shares. Additionally, the coefficient on CEO/Chairman duality is now negative indicating that the CEO and Chairman positions held by one person will lead to value destroying in the long term. While executive remuneration records a negative effect on abnormal returns in the short run, it has a positive long-term impact on the bidders' performance indicating that better paid managers are aligned with the shareholders' interests.

Of the bidder specific and deal specific characteristics variables, the coefficients of leverage, firm size and repeat bidders are significantly positive at the 10% level. Leverage continues to exert a significantly positive influence on the performance of bidder firms in the twenty-four months following the M&A announcement. This indicates management of bidder firms with a high debt level are pressured to operate effectively and efficiently in order to their debt obligations in long term. The negative of size indicates large value in the run small firms gain value. The positive of repeat bidder indicates that the more experienced the bidder is, the better the long-term stock performance. This is consistent with *et al.*'s (2008) that directors with prior acquisition help in making value-creating acquisitions. This lends support to the strategic momentum theory that firms tend to follow strategies that they have implemented and worked in the past (Pangarkar, 2000). The coefficient of firm size is significantly negative at 1% level. All the other deal and bidder characteristics are insignificant.

Robustness tests

To ensure the reliability of our results, we conduct robustness checks for the multivariate analysis. For robustness tests, we calculated bidder abnormal returns in the short-term using the market adjusted returns model where abnormal returns is the difference between the stock returns and the market index returns. The results are consistent with market model.

We estimated abnormal returns over alternative event windows (Masulis *et al.* 2007). To isolate the specific impact of the occurrence of an event, the event window was narrowed from the five-day event window to the three-day (-1, +1) event window. To prevent from missing some run-up returns especially in the case of insider trading or information leakage before press release, we widened the event window to eleven-day (-5, +5) and twenty-one-day (-10, +10) event windows. The results (see Appendix 3: Panel A) are similar to the (-2, +2) event window. We also calculate BHAR for 12 months and 36 months after the M&A announcement in robustness tests. The results (see Appendix 3: Panel B) remain consistent with BHAR for 24 months.

There is evidence from previous literature to suggest that the state plays a pivotal role in the China's M&A market as regulator and player. The state ownership measure was replaced by a new variable, namely state-controlled in regression Model 6 (see Appendix 7 and 9). Clause 41 of the Guidelines for the

Articles of Association of Listed Companies in China defines controlling shareholder as one who owns more than 30% of voting rights and who can select over half of the directors either on their own or with the concert of others. If state ownership in a firm exceeds 30%, the firm is classified as state-controlled and coded 1 or 0 otherwise. The results show that the state-controlled variable has a significant, negative short-term effect on market reaction to the M&A announcement (see Appendix 7) but a positive, though insignificant, long-term effect on post-M&A stock performance (see Appendix 9). Again, the signs and significance levels of the other variable remain the same as the primary regression model.

Prior evidence shows that size of the bidder firm plays a significant role in the M&A performance. To measure the effect of firm size, two dummy variables were created. Large (small) size takes the value of 1 for those firms with size that is in the upper (lower) quartile of the distribution of firm size defined in terms of total assets of the bidding firm (Campa and Hernando, 2006). In the short run, small firms have mixed and insignificant effects on abnormal returns, while large firms report a positive but insignificant effect on abnormal return across the two regression models (see Appendix 7). In the long run, small firms have a positive but not significant effect on bidder abnormal returns for 24 months following M&As (see Appendix 9). By contrast, large firms have a negative and significant effect on returns at the 5% level. The signs and significance levels of other variables remain unchanged. These results confirm the widely held view that large firms lose value after M&A announcement (Moeller *et al.*, 2004).

Recent studies explore the relationship between corporate governance and firm performance by “constructing an index comprised of multiple dimensions of a firm’s governance structure” (Bhagat *et al.*, 2008: p. 1832). Following DeFond *et al.* (2005), we combine the corporate governance variables into a single dichotomous variable (*Governance index*) using the median values of these variables. The regression analysis reported in Appendix 7 shows that the corporate governance index has a positive and significant at the 1% level. This confirms that corporate governance plays an important role in ensuring congruence of interests between management and shareholders and that improvements in corporate governance environment enhances shareholder value at least in the short run. In the long run, we find no relationship between governance and abnormal returns (see Appendix 9). Core *et al.* (2006) note that no relationship is expected between corporate governance and abnormal returns in M&As if the market is efficient (pp. 656). Furthermore, except that firm size and diversify changed signs of their coefficients, the signs and significance of other variables remain unchanged in comparison with the primary model.

We replace industry-fixed variables with competitive industry and unique industry variables. Product market competition has a disciplinary effect on managerial behaviour (Masulis *et al.*, 2007). Managers in competitive industries risk losing business to competitors and even their jobs if they make decisions that compromise efficiency. To capture the competitive structure of an industry, we used two different measures suggested by Gillan *et al.* (2003) and employed by Masulis *et al.* (2007), namely competitive industry and unique industry (see appendix for definition). The results indicate that in the short term, managers in competitive industries make value destroying M&A decisions while those in unique industries make value creating M&A decisions. In the long term, managers in both competitive and unique industries make value creating M&A decisions. Overall, the signs and significance of other variables do not change compared to the primary model.

Finally, we conducted diagnostic tests on the regression results. High levels of correlations between independent variables can inflate standard errors resulting in less-efficient parameter estimates. To assess this possibility, we conducted two tests of multicollinearity. First, we checked correlations among independent variables using the correlation matrix. The correlation between variables ranges between 0.01 and 0.64, none exceeding the 0.80 threshold. Second, we conducted a variance-inflation-factor (VIF) test. The values range between 1.04 and 3.51 and none of them is above the VIF threshold of 10. The two tests thus provide evidence that multicollinearity is not a problem.

CONCLUSION

We study the shareholder wealth effects of China's domestic mergers and acquisitions in the period of 2006-2010. Specifically we examine how corporate governance influences both short-term and long-term bidder abnormal returns. We demonstrate that market responses differ in ways which suggest a difference in how the market's assessment of share price from the perspectives of short run and long run. The results demonstrate that bidder firms experience wealth gains in the short run but lose value in the long run. We explore possible explanations for the shareholder wealth effects with particular reference to internal corporate governance mechanisms while controlling for deal specific and firm specific characteristics. Our analyses on the factors driving the price differences show that executive ownership (positive) and state ownership (negative) exert opposite effects on the announcement period returns. The returns further differ by way of payments with the positive effect identified for stock financing but the negative effect for cash financing. Our long-term regression analysis shows that the positive impact of executive ownership remains. Independent director, however, records a significant and negative effect on abnormal returns. Most notably when we replace independent director with board independence measured by the composite corporate governance index, we find that board independence exerts the positive effect on shareholder wealth. This is in line with findings of Masulis *et al.* (2007) that bidders with good corporate governance experience higher returns around the announcement date while those with poor corporate governance experience lower returns. Centrally, the evidence leads us to conclude that executive ownership and genuine board independence are important determinants of wealth effects in the case of China's mergers and acquisitions.

Our findings are practically relevant in that they suggest executive share ownership within a firm reduces divergent interests between agents and principals. Given the current low level of executive ownership, the Chinese authorities may need to formulate policies that encourage executive ownership. Our results also confirm the widely held view that state ownership destroys shareholder value. This suggests that the state needs to accelerate the split share reform and leave the market to determine the price. Importantly, our evidence focuses the attention of the state, managers and investors on how to improve corporate governance mechanism and managerial monitoring to align managers' interests with those of the shareholders. To achieve board independence as defined by the statutory guidelines firms simply add extra members. This calls for serious re-think on how to shape the role that independent directors should play.

While this paper shows that corporate governance structure play an important role in shareholders abnormal returns, there are several points that limit its scope. First, measures of stock performance are sensitive to the methodology and choice of variables. Indeed, our review of the literature highlights that existing studies produce varying and sometimes contradictory outcomes. Second, our study examines a sample from a particular country over a particular period and therefore its generalizability may be limited given the unique China's market environment. Third, studies on this subject suffer from low explanatory power of the independent variables as they are so many variables that influence decision making and this study is no exception. We therefore recommend further research employing different approaches and more variables to shed new light on these issues. Future research could use other stock performance measures such as operating performance and calendar time approach. The attitude with respect to whether the deals are hostile or friendly is also an interesting topic worth investigation. Given the scarcity of literature on emerging markets, we recommend similar studies on other emerging markets for comparative purposes. Finally, we recommend studies that consider both qualitative and quantitative methodologies when examining corporate attitude towards M&As and its interaction with corporate governance.

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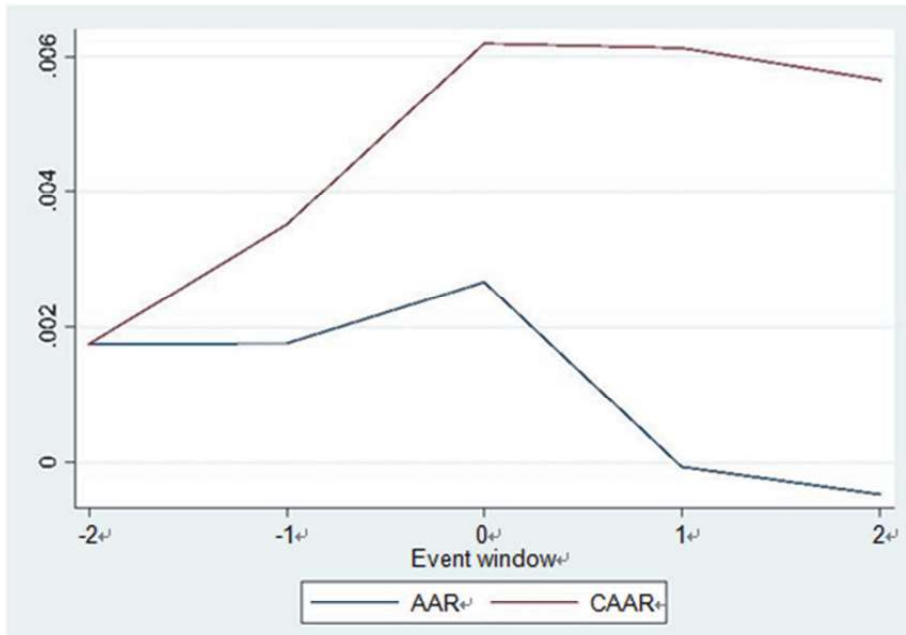
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APPENDICES

APPENDIX 1: FIGURE 1
DEVELOPMENT OF AAR AND CAAR

The Figure shows the development of both the AAR and CAAR over 5-day and the 21-day event windows for a sample of 1921 M&A announced by Chinese listed firms between 2007 and 2016.

Panel A: Bidder AAR and CAAR (-2, +2)



Panel B: Bidder AAR and CAAR (-10, +10)

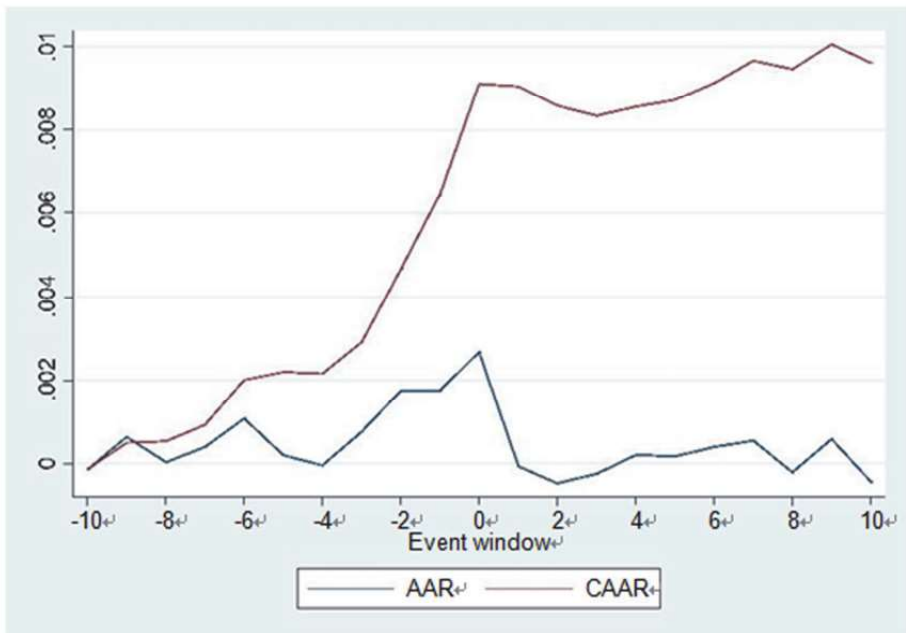


TABLE 1

DISTRIBUTION OF M&A DEALS BY YEAR AND BIDDER INDUSTRY

Panel A: Distribution of M&A deals by year of announcement

<u>Year</u>	<u>Mean deal value</u> <i>(CNY millions)</i>	<u>Number of deals</u>	<u>Number of deals (%)</u>
2007	68	41	2.13
2008	105	105	5.47
2009	119	139	7.24
2010	87	184	9.58
2011	268	165	8.59
2012	309	163	8.49
2013	338	328	17.07
2014	331	285	14.84
2015	322	257	13.38
2016	398	254	13.22
All	276	1,921	100.00

Panel B: Distribution of M&A deals by bidder firm industry

<u>Bidder industry</u>	<u>Mean deal value</u> <i>(CNY millions)</i>	<u>Number of deals</u>	<u>Number of deals (%)</u>
Agriculture	70	46	2.39
Mining	502	59	3.07
Manufacturing	189	1,071	55.75
Utility	459	104	5.41
Construction	489	39	2.03
Transportation	830	86	4.48
Information technology	651	102	5.31
Retail and wholesale	309	110	5.73
Real estate	308	97	5.05
Service	141	64	3.33
News and media	55	7	0.36
Miscellaneous	120	136	7.08
All	276	1,921	100

APPENDIX 2
DISTRIBUTION OF M&A DEALS BY PAYMENT METHOD, BUSINESS AND
RESTRUCTURING

Panel A: Distribution of M&A deals by method of payment

Payment method[↵]	Number of deals[↵]	Average deal[↵] value (CNY[↵] millions)[↵]	Number of deals[↵] %[↵]
Assets [↵]	31 [↵]	105 [↵]	1.6 [↵]
Cash [↵]	1730 [↵]	180 [↵]	90.1 [↵]
Stock [↵]	84 [↵]	1,630 [↵]	4.4 [↵]
Bearing Liability [↵]	11 [↵]	118 [↵]	0.6 [↵]
Mixed [↵]	65 [↵]	1,180 [↵]	3.4 [↵]
All[↵]	1921[↵]	276[↵]	100.0[↵]

Panel B: Distribution of M&A deals by type of restructuring

Type of restructuring[↵]	Number of deals[↵]	Average deal[↵] value (CNY[↵] millions)[↵]	Number of deals[↵] %[↵]
Asset acquisition [↵]	1740 [↵]	272 [↵]	90.6 [↵]
Asset stripping [↵]	64 [↵]	163 [↵]	3.3 [↵]
Equity transfer [↵]	43 [↵]	226 [↵]	2.2 [↵]
Debt restructuring [↵]	60 [↵]	109 [↵]	3.1 [↵]
Asset swap [↵]	6 [↵]	141 [↵]	0.3 [↵]
Merger [↵]	7 [↵]	3990 [↵]	0.4 [↵]
Share repurchase [↵]	1 [↵]	1640 [↵]	0.1 [↵]
All[↵]	1921[↵]	276[↵]	100.0[↵]

Panel C: Distribution of M&A deals by type of business

Type of business[↵]	Number of deals[↵]	Average deal[↵] value (CNY[↵] millions)[↵]	Number of deals[↵] %[↵]
Negotiated Asset Transfer [↵]	642 [↵]	419 [↵]	33.4 [↵]
Negotiated Equity Transfer [↵]	1217 [↵]	208 [↵]	63.4 [↵]
Tender Offer [↵]	2 [↵]	886 [↵]	0.1 [↵]
Debt Restructuring [↵]	60 [↵]	109 [↵]	3.1 [↵]
All[↵]	1921[↵]	276[↵]	100.0[↵]

APPENDIX 3

BIDDER ABNORMAL RETURNS

The sample consist of 1921 successful M&A announcements made by Chinese listed firms between 2007 and 2016. The cumulative abnormal returns are calculated using market model regressions that are averaged over each event window while buy-and-hold abnormal returns are calculated using market index returns as reference portfolio over each event window.

Panel A: Short-term abnormal returns

Variable ↵	Market returns model ↵			
	Cumulative abnormal returns (CAR) ↵			
	(-1,+1) ↵	(-2,+2) ↵	(-5,+5) ↵	(-10,+10) ↵
Mean ↵	0.0044 ↵	0.0057 ↵	0.0067 ↵	0.0096 ↵
Minimum ↵	-0.2182 ↵	-0.3161 ↵	-0.6228 ↵	-0.7362 ↵
25% percentile ↵	-0.0236 ↵	-0.0308 ↵	-0.0430 ↵	-0.0592 ↵
Median ↵	-0.0006 ↵	-0.0017 ↵	-0.0001 ↵	0.0029 ↵
75% percentile ↵	0.0272 ↵	0.0359 ↵	0.0485 ↵	0.0707 ↵
Maximum ↵	0.3216 ↵	0.3946 ↵	0.5565 ↵	1.4783 ↵
Standard deviation ↵	0.0554 ↵	0.0694 ↵	0.0962 ↵	0.1339 ↵
T-statistic ↵	3.46 ↵	3.58 ↵	3.06 ↵	3.14 ↵
P-value ↵	0.001 ↵	0.000 ↵	0.002 ↵	0.002 ↵
Count ↵	1921 ↵	1921 ↵	1921 ↵	1921 ↵

Panel B: Long-term abnormal returns

Variable ↵	Buy-and-hold abnormal returns ↵		
	Market adjusted ↵		
	12 months ↵	24 months ↵	36 months ↵
Mean ↵	-0.0218 ↵	-0.1139 ↵	-0.1628 ↵
Minimum ↵	-2.3610 ↵	-4.7030 ↵	-4.1039 ↵
25% percentile ↵	-0.2629 ↵	-0.4371 ↵	-0.7858 ↵
Median ↵	-0.0840 ↵	-0.1677 ↵	0.3161 ↵
75% percentile ↵	0.1320 ↵	0.1359 ↵	0.1548 ↵
Maximum ↵	8.8447 ↵	12.4679 ↵	28.1523 ↵
Standard deviation ↵	0.6316 ↵	0.9866 ↵	1.7205 ↵
T-statistic ↵	-1.50 ↵	-5.00 ↵	-3.65 ↵
P-value ↵	0.135 ↵	0.000 ↵	0.000 ↵
Count ↵	1921 ↵	1921 ↵	1667 ↵

APPENDIX 4

DISTRIBUTION OF BIDDER ABNORMAL RETURNS BY SUB-SAMPLES

Sample [↵]	CAR(-2,+2) [↵]	BHAR [↵] (24mths) [↵]	Number [↵]	Number (%) [↵]
<i>Firm size[↵]</i>				
Small firms [↵]	0.00717 [↵]	-0.02500 [↵]	482 [↵]	25.09 [↵]
Large firms [↵]	0.00782 [↵]	-0.21611 [↵]	481 [↵]	25.04 [↵]
<i>Target status[↵]</i>				
Public [↵]	0.00577 [↵]	-0.22360 [↵]	120 [↵]	6.25 [↵]
Private [↵]	0.00565 [↵]	-0.10664 [↵]	1801 [↵]	93.75 [↵]
<i>Bidder industry[↵]</i>				
Agriculture [↵]	0.01891 [↵]	0.03411 [↵]	46 [↵]	2.39 [↵]
Mining [↵]	0.00625 [↵]	-0.12618 [↵]	59 [↵]	3.07 [↵]
Manufacturing [↵]	0.00383 [↵]	-0.09089 [↵]	1071 [↵]	55.75 [↵]
Utility [↵]	0.00714 [↵]	-0.23938 [↵]	104 [↵]	5.41 [↵]
Construction [↵]	0.00956 [↵]	-0.04734 [↵]	39 [↵]	2.03 [↵]
Transportation [↵]	0.00821 [↵]	-0.45106 [↵]	86 [↵]	4.48 [↵]
Information technology [↵]	0.01415 [↵]	-0.03812 [↵]	102 [↵]	5.31 [↵]
Retail and wholesale [↵]	0.01281 [↵]	0.00231 [↵]	110 [↵]	5.73 [↵]
Real estate [↵]	0.00313 [↵]	-0.07003 [↵]	97 [↵]	5.05 [↵]
Service [↵]	0.00372 [↵]	-0.21610 [↵]	64 [↵]	3.33 [↵]
News and media [↵]	0.01171 [↵]	-0.30902 [↵]	7 [↵]	0.36 [↵]
Miscellaneous [↵]	0.00176 [↵]	-0.17435 [↵]	136 [↵]	7.08 [↵]
<i>Method of payment[↵]</i>				
Assets [↵]	0.02133 [↵]	0.14102 [↵]	31 [↵]	1.61 [↵]
Cash [↵]	0.00181 [↵]	-0.12477 [↵]	1730 [↵]	90.06 [↵]
Stock [↵]	0.07008 [↵]	0.02275 [↵]	84 [↵]	4.37 [↵]
Bearing Liability [↵]	0.02348 [↵]	-0.09425 [↵]	11 [↵]	0.57 [↵]
Mixed [↵]	0.01443 [↵]	-0.12738 [↵]	65 [↵]	3.38 [↵]

APPENDIX 5 SUMMARY STATISTICS

The sample consists of 1921 successfully completed M&A transactions over CNY1 million made by Chinese listed firms between 2007 and 2016 obtained from CSMAR database. The dependent variable CAR(-2,+2) is defined as the cumulated abnormal returns around announcement period over a 5-day event window using the market model parameters estimated between -220 and -20 days. The independent variables are: State shares, is the percentage of state ownership in the bidding firm a year before the M&A announcement. Legal person shares, is the percentage of legal person ownership in the bidding firm a year before the M&A announcement. State controlled is a dummy variable equal to 1 if the state ownership is 30% or above and 0, otherwise. Board size is the total number of directors serving on the board. Board independence is a dummy variable equal to 1 if over 33% of the bidder board members are independent and 0, otherwise. CEO duality is a dummy variable equal to 1 if the bidder CEO is also chairman of the board, 0 otherwise. Executive shares, is the bidder executive's percentage ownership of the firm. Executive pay is the total salary paid to top three executives including allowances and bonuses. Tobin's q is the market value of total assets divided by the book value of total assets. Advantage is the book value of debts divided by the market value of total assets. Public target is a dummy variable equal to 1 if the target firm is a public firm, 0 otherwise. Administration is a dummy variable equal to 1 if both the bidder and target firms fall under the administration of the same local government. Related party transaction is a dummy variable equal to 1 if it is a related party transaction, 0 otherwise. Firm size is measured by the total book value of assets. Diversifying acquisition is a dummy variable equal to 1 if the bidder and the target operate in the same industry group as per CSRC classification. All cash payment and all stock payment are dummy variables equal to 1 if only cash is used to finance the acquisition or if only equity is used, and 0 otherwise. Deal value is the value of the transaction. Repeat bidders are bidder firms that have completed more than one M&A transaction during the sample period.

Independent variable [↵]	Count [↵]	Mean [↵]	Median [↵]	Std. Dev. [↵]	Minimum [↵]	Maximum [↵]
<i>Governance variables[↵]</i>						
State shares [↵]	1921 [↵]	0.287 [↵]	0.282 [↵]	0.259 [↵]	0.000 [↵]	0.863 [↵]
Legal person shares [↵]	1921 [↵]	0.189 [↵]	0.075 [↵]	0.226 [↵]	0.000 [↵]	0.903 [↵]
Board size [↵]	1921 [↵]	9.397 [↵]	9.000 [↵]	2.142 [↵]	5.000 [↵]	19.000 [↵]
Board independence [↵]	1921 [↵]	0.801 [↵]	1.000 [↵]	0.399 [↵]	0.000 [↵]	1.000 [↵]
CEO duality [↵]	1921 [↵]	0.131 [↵]	0.000 [↵]	0.338 [↵]	0.000 [↵]	1.000 [↵]
Executive shares [↵]	1921 [↵]	0.009 [↵]	0.000 [↵]	0.051 [↵]	0.000 [↵]	0.638 [↵]
Executive pay (CNY thousands) [↵]	1921 [↵]	819.972 [↵]	568.000 [↵]	880.812 [↵]	14.000 [↵]	10500.000 [↵]
<i>Bidder characteristics[↵]</i>						
Tobin's q [↵]	1921 [↵]	2.338 [↵]	1.795 [↵]	2.286 [↵]	0.680 [↵]	48.088 [↵]
Leverage [↵]	1921 [↵]	0.143 [↵]	0.114 [↵]	0.123 [↵]	0.000 [↵]	0.788 [↵]
Administration [↵]	1921 [↵]	0.735 [↵]	1.000 [↵]	0.442 [↵]	0.000 [↵]	1.000 [↵]
Related transaction [↵]	1921 [↵]	0.605 [↵]	1.000 [↵]	0.489 [↵]	0.000 [↵]	1.000 [↵]
Firm size (CNY millions) [↵]	1921 [↵]	7390.000 [↵]	1850.000 [↵]	40700.000 [↵]	14.800 [↵]	994000.000 [↵]
<i>Deal characteristics[↵]</i>						
Public target [↵]	1921 [↵]	0.062 [↵]	0.000 [↵]	0.242 [↵]	0.000 [↵]	1.000 [↵]
Diversifying acquisition [↵]	1921 [↵]	0.902 [↵]	1.000 [↵]	0.298 [↵]	0.000 [↵]	1.000 [↵]
All cash [↵]	1921 [↵]	0.901 [↵]	1.000 [↵]	0.299 [↵]	0.000 [↵]	1.000 [↵]
All stock [↵]	1921 [↵]	0.044 [↵]	0.000 [↵]	0.205 [↵]	0.000 [↵]	1.000 [↵]
Deal value (CNY millions) [↵]	1921 [↵]	276.000 [↵]	38.900 [↵]	1460.000 [↵]	1.000 [↵]	32800.000 [↵]
Repeat bidder [↵]	1921 [↵]	0.730 [↵]	1.000 [↵]	0.444 [↵]	0.000 [↵]	1.000 [↵]

APPENDIX 6

REGRESSION ANALYSIS OF BIDDER RETURNS AROUND THE ANNOUNCEMENT DATE

The sample consists of 1921 successful M&A announcements made by 1059 Chinese listed firms between 2007 and 2016. The dependent variable is the cumulative abnormal returns over five days around announcement date. Independent variables definitions are in the Appendix. In parentheses are standard errors adjusted for heteroscedasticity (White, 1980) and bidder clustering. *, ** and *** stand for statistical significance based on two-sided tests at the 10%, 5% and 1% level, respectively. We control for year and industry effect by using year and industry dummy variables in the regressions. In the unreported results, some of the coefficients of year and industry dummies are significant.

	(1) ^{adj}		(2) ^{adj}		(3) ^{adj}		(4) ^{adj}	
	Coef. ^{adj}	Std. ^{adj} error ^{adj}	Coef. ^{adj}	Std. ^{adj} error ^{adj}	Coef. ^{adj}	Std. ^{adj} error ^{adj}	Coef. ^{adj}	Std. ^{adj} error ^{adj}
<i>Corporate Governance</i> ⁺								
State shares ^{adj}	-0.0142* ^{adj}	(0.007) ^{adj}			-0.0142** ^{adj}	(0.007) ^{adj}		
Legal person shares ⁺			0.0076 ^{adj}	(0.008) ^{adj}			0.0077 ^{adj}	(0.008) ^{adj}
Board size ^{adj}	0.0004 ^{adj}	(0.001) ^{adj}	0.0003 ^{adj}	(0.001) ^{adj}	0.0004 ^{adj}	(0.001) ^{adj}	0.0003 ^{adj}	(0.001) ^{adj}
Board independence ⁺	0.0015 ^{adj}	(0.006) ^{adj}	0.0018 ^{adj}	(0.006) ^{adj}	0.0016 ^{adj}	(0.006) ^{adj}	0.0018 ^{adj}	(0.006) ^{adj}
CEO duality ^{adj}	0.0008 ^{adj}	(0.005) ^{adj}	0.0009 ^{adj}	(0.005) ^{adj}	0.0007 ^{adj}	(0.005) ^{adj}	0.0009 ^{adj}	(0.005) ^{adj}
Executive shares ^{adj}	0.0694** ^{adj}	(0.033) ^{adj}	0.0775** ^{adj}	(0.033) ^{adj}	0.0693** ^{adj}	(0.033) ^{adj}	0.0773** ^{adj}	(0.033) ^{adj}
Log executive pay ^{adj}	-0.0014 ^{adj}	(0.002) ^{adj}	-0.0012 ^{adj}	(0.002) ^{adj}	-0.0013 ^{adj}	(0.002) ^{adj}	-0.0011 ^{adj}	(0.002) ^{adj}
<i>Bidder Characteristics</i> ^{adj}								
Tobin's q ^{adj}	-0.0020** ^{adj}	(0.001) ^{adj}	-0.0021*** ^{adj}	(0.001) ^{adj}	-0.0020** ^{adj}	(0.001) ^{adj}	-0.0020*** ^{adj}	(0.001) ^{adj}
Leverage ^{adj}	0.0006 ^{adj}	(0.016) ^{adj}	0.0038 ^{adj}	(0.016) ^{adj}	0.0011 ^{adj}	(0.016) ^{adj}	0.0043 ^{adj}	(0.016) ^{adj}
Administration ^{adj}	-0.0075* ^{adj}	(0.004) ^{adj}	-0.0078** ^{adj}	(0.004) ^{adj}	-0.0076* ^{adj}	(0.004) ^{adj}	-0.0079** ^{adj}	(0.004) ^{adj}
Related party ^{adj}	-0.0030 ^{adj}	(0.003) ^{adj}	-0.0032 ^{adj}	(0.003) ^{adj}	-0.0028 ^{adj}	(0.003) ^{adj}	-0.0030 ^{adj}	(0.003) ^{adj}
Log firm size ^{adj}	0.0007 ^{adj}	(0.002) ^{adj}	0.0002 ^{adj}	(0.002) ^{adj}	0.0006 ^{adj}	(0.002) ^{adj}	0.0001 ^{adj}	(0.002) ^{adj}
<i>Deal Characteristics</i> ^{adj}								
Public target ^{adj}	-0.0024 ^{adj}	(0.006) ^{adj}	-0.0022 ^{adj}	(0.006) ^{adj}				
Diversifying ^{adj}	0.0005 ^{adj}	(0.005) ^{adj}	0.0004 ^{adj}	(0.005) ^{adj}	0.0004 ^{adj}	(0.005) ^{adj}	0.0003 ^{adj}	(0.005) ^{adj}
All cash ^{adj}	-0.0172** ^{adj}	(0.008) ^{adj}	-0.0168** ^{adj}	(0.008) ^{adj}				
All stock ^{adj}	0.0515*** ^{adj}	(0.018) ^{adj}	0.0521*** ^{adj}	(0.018) ^{adj}				
Log deal value ^{adj}	0.0001 ^{adj}	(0.001) ^{adj}	0.0000 ^{adj}	(0.001) ^{adj}	0.0001 ^{adj}	(0.001) ^{adj}	0.0001 ^{adj}	(0.001) ^{adj}
Repeat bidder ^{adj}	-0.0009 ^{adj}	(0.004) ^{adj}	-0.0007 ^{adj}	(0.004) ^{adj}	-0.0009 ^{adj}	(0.004) ^{adj}	-0.0007 ^{adj}	(0.004) ^{adj}
Pub. target x All cash ^{adj}					-0.0200** ^{adj}	(0.010) ^{adj}	-0.0194** ^{adj}	(0.010) ^{adj}
Pvt. target x All cash ^{adj}					-0.0181** ^{adj}	(0.008) ^{adj}	-0.0178** ^{adj}	(0.008) ^{adj}
Pvt. target x All stock ^{adj}					0.0508*** ^{adj}	(0.018) ^{adj}	0.0514*** ^{adj}	(0.018) ^{adj}
Constant ^{adj}	0.0254 ^{adj}	(0.044) ^{adj}	0.0307 ^{adj}	(0.044) ^{adj}	0.0257 ^{adj}	(0.044) ^{adj}	0.0311 ^{adj}	(0.044) ^{adj}
<i>Industry dummy</i> ^{adj}	Yes ^{adj}		Yes ^{adj}		Yes ^{adj}		Yes ^{adj}	
<i>Year dummy</i> ^{adj}	Yes ^{adj}		Yes ^{adj}		Yes ^{adj}		Yes ^{adj}	
Observations ^{adj}	1921 ^{adj}		1921 ^{adj}		1921 ^{adj}		1921 ^{adj}	
R-squared ^{adj}	0.063 ^{adj}		0.062 ^{adj}		0.063 ^{adj}		0.061 ^{adj}	

APPENDIX 7

ROBUSTNESS TEST OLS REGRESSION ANALYSIS OF SHORT-TERM BIDDER RETURNS

The sample consists of 1921 successful M&A announcements made by 1059 Chinese listed firms between 2007 and 2016. The dependent variable is the cumulative abnormal returns over five days around announcement date. Independent variables definitions are in the Appendix. In parentheses are standard errors adjusted for heteroscedasticity (White, 1980) and bidder clustering. *, ** and *** stand for statistical significance based on two-sided tests at the 10%, 5% and 1% level, respectively. We control for year and industry effect by using year dummy variables in the regressions. In the unreported results, some of the coefficients of year dummies are significant.

	(1) ^{adj}		(2) ^{adj}		(3) ^{adj}		(4) ^{adj}	
	Coef. ^{adj}	Std. error ^{adj}	Coef. ^{adj}	Std. error ^{adj}	Coef. ^{adj}	Std. error ^{adj}	Coef. ^{adj}	Std. error ^{adj}
<i>Corporate Governance</i> ^{adj}								
Governance index ^{adj}	0.0106*** ^{adj}	(0.003) ^{adj}						
State controlled ^{adj}			-0.0068* ^{adj}	(0.004) ^{adj}				
State shares ^{adj}					-0.0126* ^{adj}	(0.007) ^{adj}		
Legal person shares ^{adj}							0.0073 ^{adj}	(0.007) ^{adj}
Board size ^{adj}			0.0005 ^{adj}	(0.001) ^{adj}	0.0004 ^{adj}	(0.001) ^{adj}	0.0003 ^{adj}	(0.001) ^{adj}
Board independence ^{adj}			0.0014 ^{adj}	(0.005) ^{adj}	0.0012 ^{adj}	(0.005) ^{adj}	0.0015 ^{adj}	(0.005) ^{adj}
CEO duality ^{adj}			0.0013 ^{adj}	(0.005) ^{adj}	0.0013 ^{adj}	(0.005) ^{adj}	0.0015 ^{adj}	(0.005) ^{adj}
Executive shares ^{adj}			0.0678** ^{adj}	(0.033) ^{adj}	0.0693** ^{adj}	(0.033) ^{adj}	0.0766** ^{adj}	(0.033) ^{adj}
Log executive pay ^{adj}			-0.0011 ^{adj}	(0.002) ^{adj}	-0.0015 ^{adj}	(0.002) ^{adj}	-0.0014 ^{adj}	(0.002) ^{adj}
<i>Firm Characteristics</i> ^{adj}								
Tobin's q ^{adj}	-0.0020*** ^{adj}	(0.001) ^{adj}	-0.0019** ^{adj}	(0.001) ^{adj}	-0.0019*** ^{adj}	(0.001) ^{adj}	-0.0020*** ^{adj}	(0.001) ^{adj}
Leverage ^{adj}	0.0033 ^{adj}	(0.015) ^{adj}	0.0009 ^{adj}	(0.016) ^{adj}	-0.0010 ^{adj}	(0.016) ^{adj}	0.0014 ^{adj}	(0.015) ^{adj}
Administration ^{adj}	-0.0071* ^{adj}	(0.004) ^{adj}	-0.0073* ^{adj}	(0.004) ^{adj}	-0.0074* ^{adj}	(0.004) ^{adj}	-0.0077* ^{adj}	(0.004) ^{adj}
Related party ^{adj}	-0.0028 ^{adj}	(0.003) ^{adj}	-0.0029 ^{adj}	(0.003) ^{adj}	-0.0031 ^{adj}	(0.003) ^{adj}	-0.0034 ^{adj}	(0.003) ^{adj}
Log firm size ^{adj}	0.0001 ^{adj}	(0.002) ^{adj}	0.0008 ^{adj}	(0.002) ^{adj}				
Small firm ^{adj}					-0.0001 ^{adj}	(0.004) ^{adj}	0.0003 ^{adj}	(0.004) ^{adj}
Large firm ^{adj}					0.0051 ^{adj}	(0.004) ^{adj}	0.0047 ^{adj}	(0.004) ^{adj}
<i>Deal Characteristics</i> ^{adj}								
Diversifying ^{adj}	-0.0004 ^{adj}	(0.005) ^{adj}	0.0000 ^{adj}	(0.005) ^{adj}	0.0005 ^{adj}	(0.005) ^{adj}	0.0003 ^{adj}	(0.005) ^{adj}
Log deal value ^{adj}	0.0004 ^{adj}	(0.001) ^{adj}	0.0003 ^{adj}	(0.001) ^{adj}	0.0002 ^{adj}	(0.001) ^{adj}	0.0000 ^{adj}	(0.001) ^{adj}
Repeat bidder ^{adj}	-0.0019 ^{adj}	(0.004) ^{adj}	-0.0008 ^{adj}	(0.004) ^{adj}	-0.0009 ^{adj}	(0.004) ^{adj}	-0.0008 ^{adj}	(0.004) ^{adj}
Pub. target x All cash ^{adj}	-0.0183* ^{adj}	(0.010) ^{adj}	-0.0182* ^{adj}	(0.010) ^{adj}	-0.0186* ^{adj}	(0.010) ^{adj}	-0.0181* ^{adj}	(0.010) ^{adj}
Pvt. target x All cash ^{adj}	-0.0172** ^{adj}	(0.008) ^{adj}	-0.0178** ^{adj}	(0.008) ^{adj}	-0.0181** ^{adj}	(0.008) ^{adj}	-0.0179** ^{adj}	(0.008) ^{adj}
Pvt. target x All stock ^{adj}	0.0514*** ^{adj}	(0.018) ^{adj}	0.0509*** ^{adj}	(0.018) ^{adj}	0.0509*** ^{adj}	(0.018) ^{adj}	0.0515*** ^{adj}	(0.018) ^{adj}
<i>Industry</i> ^{adj}								
Competitive industry ^{adj}	-0.0005 ^{adj}	(0.007) ^{adj}	-0.0002 ^{adj}	(0.007) ^{adj}	-0.0001 ^{adj}	(0.007) ^{adj}	-0.0001 ^{adj}	(0.007) ^{adj}
Unique industry ^{adj}	0.0027 ^{adj}	(0.004) ^{adj}	0.0025 ^{adj}	(0.004) ^{adj}	0.0028 ^{adj}	(0.004) ^{adj}	0.0030 ^{adj}	(0.004) ^{adj}
Constant ^{adj}	0.0292 ^{adj}	(0.035) ^{adj}	0.0292 ^{adj}	(0.038) ^{adj}	0.0548 ^{adj}	(0.034) ^{adj}	0.0494 ^{adj}	(0.034) ^{adj}
Industry dummy ^{adj}	No ^{adj}		No ^{adj}		No ^{adj}		No ^{adj}	
Year dummy ^{adj}	Yes ^{adj}		Yes ^{adj}		Yes ^{adj}		Yes ^{adj}	
Observations ^{adj}	1921 ^{adj}		1921 ^{adj}		1921 ^{adj}		1921 ^{adj}	
R-squared ^{adj}	0.060 ^{adj}		0.060 ^{adj}		0.060 ^{adj}		0.059 ^{adj}	

APPENDIX 8
OLS REGRESSION ANALYSIS OF LONG-TERM BIDDER RETURNS

The sample consists of 1921 successful M&A announcements made by 1059 Chinese listed firms between 2007 and 2016. The dependent variable is the buy-and-hold abnormal returns over twenty-four months following announcement date. Independent variables definitions are in the Appendix. In parentheses are standard errors adjusted for heteroscedasticity (White, 1980) and bidder clustering. *, ** and *** stand for statistical significance based on two-sided tests at the 10%, 5% and 1% level, respectively. We control for year and industry effect by using year and industry dummy variables in the regressions. In the unreported results, some of the coefficients of year and industry dummies are significant.

	(1) ^{adj}		(2) ^{adj}		(3) ^{adj}		(4) ^{adj}	
	Coef. ^{adj}	Std. error ^{adj}	Coef. ^{adj}	Std. error ^{adj}	Coef. ^{adj}	Std. error ^{adj}	Coef. ^{adj}	Std. error ^{adj}
<i>Corporate Governance</i> ^{adj}								
State shares ^{adj}	0.0788 ^{adj}	(0.104) ^{adj}			0.0780 ^{adj}	(0.104) ^{adj}		
Legal person shares ^{adj}			-0.0962 ^{adj}	(0.100) ^{adj}			-0.0963 ^{adj}	(0.100) ^{adj}
Board size ^{adj}	-0.0150 ^{adj}	(0.010) ^{adj}	-0.0151 ^{adj}	(0.010) ^{adj}	-0.0149 ^{adj}	(0.010) ^{adj}	-0.0151 ^{adj}	(0.010) ^{adj}
Board independence ^{adj}	-0.2341 ^{adj} **	(0.105) ^{adj}	-0.2348 ^{adj} **	(0.105) ^{adj}	-0.2342 ^{adj} **	(0.105) ^{adj}	-0.2350 ^{adj} **	(0.105) ^{adj}
CEO duality ^{adj}	-0.0832 ^{adj}	(0.067) ^{adj}	-0.0818 ^{adj}	(0.067) ^{adj}	-0.0834 ^{adj}	(0.067) ^{adj}	-0.0820 ^{adj}	(0.067) ^{adj}
Executive shares ^{adj}	0.6965 ^{adj} *	(0.391) ^{adj}	0.6337 ^{adj}	(0.392) ^{adj}	0.6952 ^{adj} *	(0.391) ^{adj}	0.6326 ^{adj}	(0.392) ^{adj}
Log executive pay ^{adj}	0.0180 ^{adj}	(0.032) ^{adj}	0.0179 ^{adj}	(0.032) ^{adj}	0.0182 ^{adj}	(0.032) ^{adj}	0.0181 ^{adj}	(0.032) ^{adj}
<i>Firm Characteristics</i> ^{adj}								
Tobin's q ^{adj}	0.0112 ^{adj}	(0.017) ^{adj}	0.0117 ^{adj}	(0.017) ^{adj}	0.0111 ^{adj}	(0.017) ^{adj}	0.0116 ^{adj}	(0.017) ^{adj}
Leverage ^{adj}	0.6647 ^{adj} **	(0.270) ^{adj}	0.6544 ^{adj} **	(0.263) ^{adj}	0.6615 ^{adj} **	(0.269) ^{adj}	0.6513 ^{adj} **	(0.262) ^{adj}
Administration ^{adj}	0.0373 ^{adj}	(0.054) ^{adj}	0.0371 ^{adj}	(0.054) ^{adj}	0.0359 ^{adj}	(0.054) ^{adj}	0.0356 ^{adj}	(0.054) ^{adj}
Related party ^{adj}	-0.0275 ^{adj}	(0.054) ^{adj}	-0.0267 ^{adj}	(0.054) ^{adj}	-0.0271 ^{adj}	(0.054) ^{adj}	-0.0262 ^{adj}	(0.054) ^{adj}
Log firm size ^{adj}	-0.0737 ^{adj} ***	(0.027) ^{adj}	-0.0735 ^{adj} ***	(0.026) ^{adj}	-0.0739 ^{adj} ***	(0.027) ^{adj}	-0.0738 ^{adj} ***	(0.026) ^{adj}
<i>Deal Characteristics</i> ^{adj}								
Public target ^{adj}	-0.1008 ^{adj}	(0.083) ^{adj}	-0.1031 ^{adj}	(0.083) ^{adj}				
Diversifying ^{adj}	0.0177 ^{adj}	(0.059) ^{adj}	0.0177 ^{adj}	(0.060) ^{adj}	0.0176 ^{adj}	(0.059) ^{adj}	0.0176 ^{adj}	(0.059) ^{adj}
All cash ^{adj}	-0.0188 ^{adj}	(0.126) ^{adj}	-0.0194 ^{adj}	(0.126) ^{adj}				
All stock ^{adj}	0.1434 ^{adj}	(0.164) ^{adj}	0.1404 ^{adj}	(0.164) ^{adj}				
Log deal value ^{adj}	-0.0078 ^{adj}	(0.017) ^{adj}	-0.0072 ^{adj}	(0.017) ^{adj}	-0.0073 ^{adj}	(0.017) ^{adj}	-0.0067 ^{adj}	(0.017) ^{adj}
Repeat bidder ^{adj}	0.0955 ^{adj} *	(0.052) ^{adj}	0.0940 ^{adj} *	(0.053) ^{adj}	0.0954 ^{adj} *	(0.052) ^{adj}	0.0939 ^{adj} *	(0.052) ^{adj}
Pub. target x All cash ^{adj}					-0.1401 ^{adj}	(0.146) ^{adj}	-0.1430 ^{adj}	(0.146) ^{adj}
Pvt. target x All cash ^{adj}					-0.0204 ^{adj}	(0.122) ^{adj}	-0.0208 ^{adj}	(0.122) ^{adj}
Pvt. target x All cash ^{adj}					0.1308 ^{adj}	(0.161) ^{adj}	0.1279 ^{adj}	(0.161) ^{adj}
Constant ^{adj}	1.5097 ^{adj} **	(0.621) ^{adj}	1.5517 ^{adj} **	(0.617) ^{adj}	1.5061 ^{adj} **	(0.621) ^{adj}	1.5484 ^{adj} **	(0.616) ^{adj}
Industry dummy ^{adj}	Yes ^{adj}		Yes ^{adj}		Yes ^{adj}		Yes ^{adj}	
Year dummy ^{adj}	Yes ^{adj}		Yes ^{adj}		Yes ^{adj}		Yes ^{adj}	
Observations ^{adj}	1921 ^{adj}		1921 ^{adj}		1921 ^{adj}		1921 ^{adj}	
R-squared ^{adj}	0.053 ^{adj}		0.053 ^{adj}		0.053 ^{adj}		0.053 ^{adj}	

APPENDIX 9
ROBUST OLS REGRESSION ANALYSIS OF LONG-TERM BIDDER RETURNS

The sample consists of 1921 successful M&A announcements made by 1059 Chinese listed firms between 2007 and 2016. The dependent variable is the buy-and-hold abnormal returns over twenty-four months following announcement date. Independent variables definitions are in the Appendix. In parentheses are standard errors adjusted for heteroscedasticity (White, 1980) and bidder clustering. *, ** and *** stand for statistical significance based on two-sided tests at the 10%, 5% and 1% level, respectively. We control for year effects by using year dummy variables in the regressions. In the unreported results, some of the coefficients of year dummies are significant.

	(5) [↵]		(6) [↵]		(7) [↵]		(8) [↵]	
	Coef. [↵]	Std. error [↵]	Coef. [↵]	Std. error [↵]	Coef. [↵]	Std. error [↵]	Coef. [↵]	Std. error [↵]
<i>Corporate Governance</i> [↵]								
Governance index [↵]	-0.0025 [↵]	(0.050) [↵]						
State controlled [↵]			0.0599 [↵]	(0.054) [↵]				
State shares [↵]					0.0277 [↵]	(0.099) [↵]		
Legal person shares [↵]							-0.0561 [↵]	(0.100) [↵]
Board size [↵]			-0.0169 [↵]	(0.011) [↵]	-0.0172 [↵]	(0.011) [↵]	-0.0176 [↵]	(0.010) [↵]
Board independence [↵]			-0.2383 ^{**↵}	(0.104) [↵]	-0.2362 ^{**↵}	(0.104) [↵]	-0.2362 ^{**↵}	(0.104) [↵]
CEO duality [↵]			-0.0785 [↵]	(0.067) [↵]	-0.0790 [↵]	(0.066) [↵]	-0.0775 [↵]	(0.066) [↵]
Executive shares [↵]			0.7367 ^{*↵}	(0.391) [↵]	0.6905 ^{*↵}	(0.392) [↵]	0.6598 ^{*↵}	(0.395) [↵]
Log executive pay [↵]			0.0187 [↵]	(0.030) [↵]	0.0098 [↵]	(0.030) [↵]	0.0104 [↵]	(0.030) [↵]
<i>Firm Characteristics</i> [↵]								
Tobin's q [↵]	0.0118 [↵]	(0.017) [↵]	0.0114 [↵]	(0.017) [↵]	0.0167 [↵]	(0.017) [↵]	0.0170 [↵]	(0.018) [↵]
Leverage [↵]	0.5492 ^{**↵}	(0.242) [↵]	0.6284 ^{**↵}	(0.259) [↵]	0.6021 ^{**↵}	(0.264) [↵]	0.6017 ^{**↵}	(0.259) [↵]
Administration [↵]	0.0418 [↵]	(0.055) [↵]	0.0317 [↵]	(0.054) [↵]	0.0391 [↵]	(0.054) [↵]	0.0383 [↵]	(0.055) [↵]
Relate party [↵]	-0.0251 [↵]	(0.054) [↵]	-0.0264 [↵]	(0.053) [↵]	-0.0298 [↵]	(0.053) [↵]	-0.0297 [↵]	(0.053) [↵]
Log firm size [↵]	-0.0684 ^{***↵}	(0.022) [↵]	-0.0722 ^{***↵}	(0.026) [↵]				
Small firm [↵]					0.0725 [↵]	(0.075) [↵]	0.0746 [↵]	(0.074) [↵]
Large firm [↵]					-0.1180 ^{**↵}	(0.054) [↵]	-0.1196 ^{**↵}	(0.054) [↵]
<i>Deal Characteristics</i> [↵]								
Diversifying [↵]	0.0470 [↵]	(0.055) [↵]	0.0357 [↵]	(0.057) [↵]	0.0324 [↵]	(0.058) [↵]	0.0321 [↵]	(0.058) [↵]
Log deal value [↵]	-0.0048 [↵]	(0.016) [↵]	-0.0077 [↵]	(0.016) [↵]	-0.0113 [↵]	(0.016) [↵]	-0.0109 [↵]	(0.015) [↵]
Repeat bidder [↵]	0.0827 [↵]	(0.054) [↵]	0.0913 ^{*↵}	(0.053) [↵]	0.0911 ^{*↵}	(0.053) [↵]	0.0904 ^{*↵}	(0.053) [↵]
Pub. target x All cash [↵]	-0.1388 [↵]	(0.145) [↵]	-0.1384 [↵]	(0.144) [↵]	-0.1384 [↵]	(0.143) [↵]	-0.1395 [↵]	(0.144) [↵]
Pvt. Target x All cash [↵]	-0.0248 [↵]	(0.125) [↵]	-0.0259 [↵]	(0.123) [↵]	-0.0306 [↵]	(0.122) [↵]	-0.0302 [↵]	(0.122) [↵]
Pvt. Target x All stock [↵]	0.1212 [↵]	(0.165) [↵]	0.1379 [↵]	(0.163) [↵]	0.1500 [↵]	(0.162) [↵]	0.1490 [↵]	(0.162) [↵]
<i>Industry</i> [↵]								
Competitive industry [↵]	0.0410 [↵]	(0.120) [↵]	0.0510 [↵]	(0.121) [↵]	0.0589 [↵]	(0.120) [↵]	0.0589 [↵]	(0.120) [↵]
Unique industry [↵]	0.0734 [↵]	(0.061) [↵]	0.0683 [↵]	(0.061) [↵]	0.0659 [↵]	(0.061) [↵]	0.0651 [↵]	(0.061) [↵]
Constant [↵]	1.3919 ^{***↵}	(0.528) [↵]	1.4562 ^{***↵}	(0.555) [↵]	0.0990 [↵]	(0.495) [↵]	0.1134 [↵]	(0.500) [↵]
<i>Industry dummy</i> [↵]	No [↵]		No [↵]		No [↵]		No [↵]	
<i>Year dummy</i> [↵]	Yes [↵]		Yes [↵]		Yes [↵]		Yes [↵]	
Observations [↵]	1921 [↵]		1921 [↵]		1921 [↵]		1921 [↵]	
R-squared [↵]	0.040 [↵]		0.047 [↵]		0.046 [↵]		0.046 [↵]	

**APPENDIX 10
VARIABLE DEFINITIONS**

Panel A: Cumulative abnormal returns	
CAR (-2, +2)	Five day cumulative abnormal return calculated using market model. Market model parameters are estimated over 200 day estimation period starting from -220 to -21 before announcement date
BHAR_24	Bidder's buy-and-hold returns minus the benchmark portfolio's buy-and-hold returns over same post-acquisition periods, that is, 12 months and 24 months. The equally weighted market index returns for the Shanghai or Shenzhen Stock Exchange are used depending on which the sample firm is listed.
Panel B: Corporate governance characteristics	
State shares	Percentage of state ownership in the bidder firm a year before M&A announcement
Board size	Total number of directors serving on the board
Legal person shares	Percentage of legal person ownership in the bidder firm a year before M&A announcement
Board independence	Dummy variable equal to 1 if over 33% of bidder directors are independent 0 otherwise.
Executive pay	Total pay is the total salary paid to the top three executives including bonuses a year before M&A announcement.
Executive shares	Percentage of executive ownership in the bidder firm a year before M&A announcement.
CEO duality	Dummy variable equal to 1 if the bidder CEO is also chairperson a year before M&A announcement.
Panel C: Bidder characteristics	
Tobin's	Market value of assets over the book value of assets
Administration	Dummy variable equal to 1 if bidder and target firms fall under the same local government administration
Firm size	Log transformation of book value of total assets
Related party transaction	Dummy variable equal to 1 if it is a related party transaction and 0 otherwise
Leverage	Book value of debt divided by the market value of total assets
Panel D: Deal characteristics	
Private target	Dummy variable equal to 1 if the target is a private firm and 0 otherwise
Public target	Dummy variable equal to 1 if the target is a public firm and 0 otherwise
All stock	Dummy variable equal to 1 if the M&A deal is all paid for by stock and 0 otherwise
All cash	Dummy variable equal to 1 if the M&A deal is all paid in cash and 0 otherwise
Diversifying acquisition	Dummy variable equal to 1 if the bidder and the target firms operate in different industries, as per CSCR (2007) classification and 0 otherwise
Repeat bidders	Bidder firms that have completed more than one M&A deal during the sample period.

Deal value	Value of the M&A deal in Chinese yuan.
Panel E: Product market competition	
Competitive industry	Dummy variable equal to 1 if the bidder's industry is in the bottom quartile of all CSRC industries annual sorted by the Herfindahl index and 0 otherwise. Herfindahl index is computed as the sum of squared market shares of all CSMAR database firms in the industry and with valid data on sales.
Unique industry	Dummy variable equal to 1 if the bidder's industry is in the top quartile of all CSRC industries annually sorted by industry-mean product uniqueness and 0 otherwise. Product uniqueness is measured as selling expenses divided by sales.