

Acquisitions and Insider Trading: The Chinese Experience

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Although pre bid run ups and illegal insider trading on takeovers is studied in several countries, there is no study on this phenomenon in Chinese corporations. Amidst the very few studies which do examine Chinese mergers and acquisitions, this unique aspect is studied by looking at pre-bid run up of prices / returns for both acquirers and target. A distinct pattern and magnitude of run ups is found in a sample of Chinese firms. Surprisingly, the pattern shows run ups occurring a relatively long time before announcement (90 days), and that the magnitude of the run up is much higher for the acquirer firm compared to the target. Furthermore, conditional analyses show that state and legal ownership has negative effects on insider return profits in acquirers as hypothesized. This is consistent with the rationale that state/legal owners tend to avoid insider trading to avoid personal prosecution and liability and to comply with state regulations. Mixed control firms show positive effects on insider return profits for targets as hypothesized.

Field of Research: Insider Trading, Run ups, Acquisitions, Chinese, corporations, State Ownership

1. Introduction

In November 2015, a renowned investment banker, Xue Rongnian was arrested by police for insider trading and market manipulation. His arrest signaled efforts that the China Securities Regulatory Commission (CSRC) was stepping up in its crackdown on dodgy traders to restore investor confidence in the country's volatile markets after a series of market scandals which retail investors suffered losses. Xue demonstrated cunning, "meticulously planned and covert tactics" to thwart investigations. With his strong connections to senior regulators and securities officials, Xue lobbied investigators to halt probes, coerced investigators to give up by sending short messages, and manipulated people to lie to investigators in his cases. Xue used insider information related to the companies' restructuring or fundraising to buy and sell shares. He is reported to have made 500 million yuan from illegal insider trading between 2013 and 2014. Since the formation of the Chinese stock market in 1990, insider trading has been blamed as the "bogeyman behind the roller-coaster ride of the markets, with millions of small investors getting shortchanged by powerful and unethical fund managers¹."

Although there is an enormous amount of literature on mergers and acquisitions (see survey reviews of Martynova and Renneboog, 2008; Bruner, 2002), there is relatively scant literature on the Chinese market for corporate control. So far, a handful of Chinese M&A studies have examined: 1) announcement effects on acquirer's rivals (Gaur et al., 2013), 2) the role of political connections (Su et al., 2013), 3) the role of state ownership on short term and long term performance (Zhou et al., 2015), 4) cross-border acquisitions (Min and Boateng, 2015) and 5) control transfers from state to non state firms (Chen et al., 2008). Chinese markets including takeovers offer a rich, puzzling and distinct country context to

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study acquisitions in which much research is needed. For example, these salient features of the Chinese M & A context: adoption from Western laws, the peculiar effects of state ownership on takeover control, the unfair treatment of minority shareholders, and high government involvement, make the Chinese context for studying M&A compelling.

Historically, China borrows its corporate laws and regulations from Western countries and adapts them to develop its M & A market. In 1993, the state council enacted the Regulation on the Administration of the Issuing and Trading of Shares (Yu, 2005). The Issuing and Trading of Shares provisions on takeovers are very similar to the Hong Kong Code on Takeovers and Mergers, which itself is based on the London City Code, an English-style common law system. The M & A market did not begin until 1994 and as such offers a rich study of the formation of a young takeover market. On the other hand, China contrasts with mature takeover markets in countries like the United States in which there are at least five takeover waves (Martynova and Renneboog, 2008). While the body of literature on M & A is vast, the studies primarily relate to the United States, the UK, Europe, Canada and Australia whose economies are very different from China's. These markets are developed and efficient; whereas in China, markets show weak efficiency (Charles and Darné, 2009) and imperfect markets (Huang and Eun, 2007).

Clearly, illegal insider trading is seen as the “bogeyman¹” in China inferring that it is a highly important and charged issue affecting investor confidence and financial markets. Unfortunately, in spite of the widespread media and press coverage of this issue, there is no study on M&A that examines illegal insider trading in China. Therefore, this study is motivated to uncover this missing aspect in the academic Chinese M&A literature. The insider trading M&A literature has demonstrated pre bid run-ups in Canada (King, 2009; Cumming and Li, 2011), United States (Agrawal and Tareque, 2012), and Australia (Aspris et al., 2014). This study on takeovers and pre bid run ups is distinct because takeovers in China involve policy directives, state politicians and bureaucrats which contrast with executives who make takeovers in well functioning markets in western countries. As an explanation, control transfers of state shares to the private sector are performed by the Chinese central government rather than by market forces (Chen et al., 2008)

Pre bid run ups for takeover announcements is examined for a large sample of Chinese takeover deals during 1998 to 2005. Most insider M&A studies have examined run ups for target firms. In contrast, *acquirers* and targets are the focus in this study. A distinct pattern and magnitude of run ups is found for a sample of Chinese firms. Surprisingly, this pattern shows run ups occurring a relatively long time before announcement (90 days) which is longer than all other country studies (longest is 51 days). Moreover, the magnitude of the run up is much higher for the acquiring firm compared to the target firm. In other country studies, the run up is highest for the target firm. Hence, the first contribution of this study is that it shows there are pre bid run ups suggesting illegal insider trading exists in Chinese markets, and these run up patterns are different from the literature.

The unique political economic context in which there is state ownership in most Chinese firms plays a significant role in understanding corporate finance. State ownership's influence on pre bid run up performance is further considered as it matters greatly in China; whereas, such ownership does not exist in North American firms. Conditional analyses results show that state and legal ownership has negative effects on insider return profits in acquirers as hypothesized. This is consistent with the rationale that state/legal owners tend to avoid insider trading to avoid personal liability and to comply with state regulations. Mixed control firms show positive effects on insider return profits for targets as we hypothesized. This too is consistent with the rationale that mixed control firms provides opportunities for private owners to engage in insider trading. This study contributes to the overall M&A literature by highlighting the role of country context and specifically, state ownership or governance

influences on insider trading profits. Section 2 reviews the latest M&A literature. Next, the hypotheses and methodology are explained. Section 3 presents the development of hypotheses, and section 4 describes the sample. Section 5 presents results and discussion. The last section concludes.

2. Literature Review on M & A and Insider Trading

Martynova and Renneboog (2008) review this large M & A literature with particular questions focused on the M & A history of cyclical wave patterns. They find that the patterns of takeover activity and their profitability vary significantly across takeover waves. Moreover, they observe that usually non-rational, often self-interested managerial decision-making drives takeovers towards the end of each wave.

Gorton et al. (2009) propose a novel theory of mergers and firm size. Their theory combines managerial merger motives with an industry-level regime shift that may lead to value-increasing merger opportunities. Anticipation of these merger opportunities can lead to defensive acquisitions, where managers acquire other firms to avoid losing private benefits if their firms are acquired, or “positioning” acquisitions, where firms position themselves as more attractive takeover targets to earn takeover premiums. They show empirical support for their theory's predictions. Acemoglu et al. (2009) study the determinants of vertical M & A integration in an extensive data set of over 750,000 firms from 93 countries. They find that contracting costs and financial development by themselves appear to have no effect on vertical integration. Savor and Qi (2009) conclude that stock mergers create value for acquirers. This is consistent with their hypothesis that overvalued firms create value for long-term shareholders by using their equity as currency. Dittmar et al. (2012) examine the impact of financial sponsor competition on corporate buyers. They find that buyers who purchase targets that financial buyers also bid on outperform corporate acquirers who buy targets bid on by corporate firms only. Nain and Yao (2013) show that the observed correlation between institutional investor ownership and the success of mergers are partly driven by active stock picking.

There are few researches on Chinese M & A. Gaur et al. (2013) study the impact of M&A announcements on the stock market returns of an acquirer's rivals in China. They find support for their growth probability hypothesis in which an acquisition announcement can signal growth in the acquirer's industry. Consequently, the rivals also experience a positive stock market reaction to the announcement. Su et al. (2013) examine 324 acquisition deals specifically involving non-state owned enterprise (SOE) who acquire non SOE private firms in China. They demonstrate that politically connected firms are more successful at acquiring high quality local businesses compared to firms without political connections. In addition, the same politically connected firms gain significantly higher cumulative abnormal returns in the short and long term after announcement than firms without political connections.

Zhou et al. (2015) examine the role that state ownership has on Chinese M&A by studying their short term and long term performance. They find that SOE acquirers outperform in the long term compared to privately owned enterprise peers from 1994 to 2008. Their results suggest that the SOE advantage of government intervention outweighs their disadvantage of inefficiency.

Min and Boateng (2015) examine cross-border acquisitions made by Chinese firms. They show that Chinese acquirers make wealth gains of 0.50 to 1.52% over a ten day window surrounding announcement. They further demonstrate that state ownership and institutional ownership influences these gains in shareholder value. Chen et al. (2008) study control

transfers. They examine the impact on performance when the government sells controlling shares to state and private owners.

Looking at recent developments in insider trading literature, Madura and Marciniak (2014) examine characteristics of takeover targets that trigger insider trading investigations by the Securities and Exchange Commission (SEC). Notably, they show that targets which exhibit more pronounced abnormal stock price run-ups and abnormal trading volume are associated with an SEC investigation. When the takeover is initiated by a foreign buyer or a public buyer, and the target is relatively large, SEC investigations are more likely.

Agrawal and Tareque (2012) examine open stock trades by insiders in about 3700 takeover targets to understand insider trading actions before announcement. They show that insiders use a method known as passive trading which is profitable. Insiders do refrain from profitable active trading before takeover announcements in accordance with insider trading regulations; however, passive trading can circumvent them.

Aspris et al. (2014) challenge the long standing view that price run-ups ahead of takeover announcements imply insider trading. In their study of 450 Australian takeover targets, they examine the contribution of a range of public information sources that are known to generate market anticipation. After accounting for these sources of information, they find that there is no significant pre bid run up. Thus, they conclude that previous findings which attribute run-ups to illegal insider trading may be overstating its existence.

King (2009) examines pre bid run ups in target firms ahead of Canadian takeovers. He finds evidence of abnormal returns and abnormal turnover ahead of the announcement consistent with illegal insider trading. Of note, the abnormal turnover takes place far ahead of the announcement while the abnormal return run up occurs in the last five days. Similarly, Cumming and Li (2011) first examine whether there are price run-ups and changes in trading volume happening for Canadian acquirers prior to announcement of takeover. They find evidence consistent with insider trading of acquirer's stock in specific situations.

3. Hypotheses Development

The occurrence and pattern of insider trading in terms of size of price run-ups and timing are explained by two competing and perhaps complementary hypotheses. Ruback and Jensen (1983) offer the market anticipation hypothesis which explains that investors can anticipate takeover news based on rumor, industry trends, or firm specific factors. Thus, market anticipation increases buying trades from investors which in turn move prices leading to a run-up ahead of a takeover announcement. The second hypothesis known as insider trading hypothesis (Keown and Pinkerton, 1981) explains that run-ups are caused by insiders who are trading illegally to profit from price run-ups leading to the takeover announcement. The market notices these information leaks, and other traders follow the trades pursuing profit leading to the run-up. Much of the literature has shown support for the insider trading hypothesis although both hypotheses together likely explain run-ups.

In the context of Chinese takeovers, financial markets and regulations including insider trading ones are less developed and efficient. This environment can enable illegal insider trading to occur more easily and to be less enforceable because detecting insider trading by abnormal price run-ups is more difficult due to market noise. In addition, Chinese firms have several kinds of owners which include: state and legal institutions, employees and private investors which allow more possibilities for information leakage and insider trading to occur. As well, the Chinese investor market behaves like a herd in a very speculative, opportunistic and responsive manner to news, rumors and trends to profit from takeover news. Therefore,

run-ups in Chinese takeovers are predicted to occur because of both the insider trading and the market anticipation hypotheses.

Pre bid run-ups prior to announcement of takeovers are extensively documented in the M&A literature. The literature has demonstrated pre bid run-ups in Canada (King, 2009; Cumming and Li, 2011), United States (Agrawal and Tareque, 2012), United Kingdom, Australia (Aspris et al., 2014). Insider trading should also occur in Chinese takeovers; therefore, as a hypothesis:

H1: There will be abnormal returns in the pre-announcement period for acquirers and targets.

The influence of state ownership has long been a topic of interest in corporate finance in China because it is a unique institutional firm feature which greatly influences the context of corporate finance. State ownership governs and controls firm objectives. State ownership is shown to affect merger performance (Zhou et al., 2015), firm performance (Ng and Yuce, 2009; Liu et al., 2012), capital structure, and investment (Chen et al., 2016). Executive managers / political officials of state owned enterprises are deterred from illegal insider trading by the Chinese government because: 1) they undermine the financial system and political economy, and 2) severe consequences of being liable to prosecution and punishment for corruption. Therefore, state ownership should deter or lower insider trading and its profit motivation in this hypothesis:

H2: State ownership will have a negative effect on abnormal returns in the M&A pre-announcement period.

The governance explanation to insider trading in acquisitions merits further study; namely, the role of private ownership is not examined in the literature. As said, there are different types of owners of Chinese shares, and the issue of control of the firm is this study's focus. That is, whether if the firm is state or privately controlled, and especially if it is a mixed controlled firm (part state and part private) matters to insider trading profits. The private owners and / or managers in these mixed firms are likely motivated to profit from insider trading with their inside knowledge of a takeover decision. In the case of management, this is a clear case of agency conflict (Jensen and Meckling, 1976) in which the manager profits from his takeover or be acquired decision. They can more easily avoid the risk of detection for illegal insider trading in a market that is less efficient and has high market anticipation. At the same time, the deterrence effect of state owners is diminished. Therefore, as a third hypothesis:

H3: Mixed control will have a positive effect on abnormal returns in the M&A pre-announcement period.

4. Methodology

The standard event study method is used to look for pre bid run-ups and to measure the cumulative average abnormal returns (CAAR) prior to M&A deal announcements. Three methods of estimating abnormal returns: market, market adjusted, and mean-adjusted models are used. Daily stock returns are used to estimate the abnormal returns associated with the merger announcement (Brown and Warner, 1985). For each security, an estimation period starts at trading day -290 and ends at trading day -91 relative to the takeover day (t=0). The run event pre-announcement period starts 90 trading days prior to the event day (t=0) and ends 20 days after. For the takeover firms listed on the Shanghai Stock Exchange (SSE), the corresponding *Shanghai Stock Exchange Composite Index* is the benchmark

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index. For the takeover firms listed on the Shenzhen Stock Exchange (SZSE), the respective *Shenzhen Stock Exchange Composite Index* is the benchmark index. For each security i , different measures of abnormal returns are estimated by the *Market model*:

$$AR_{i,t} = R_{i,t} - (\hat{\alpha}_i + \hat{\beta}_i R_{m,t}) \quad (1)$$

Where $\hat{\alpha}_i$ and $\hat{\beta}_i$ are OLS values from the estimation period prior to the event window (270 to 21 trading days before the first bid announcement). The cumulative abnormal returns (CARs) are calculated over the event period $[t_1, t_2]$: $CAR_i = AR_{it_1} + \dots + AR_{it_2}$. The following test statistics for the event period $[t_1, t_2]$ are used to test the null hypothesis, $H_0: CAAR=0$ where (CAAR) is the computed cross-sectional average of a firm's CAR.

$$Z_{car} = \frac{\frac{1}{N} \sum_{i=1}^N CAR_i}{s(CAR)/\sqrt{N}} = \frac{CAAR}{s(CAR)/\sqrt{N}}$$

$$CAAR = \frac{1}{N} \sum_{i=1}^N CAR_i \quad (2, 3)$$

In addition, the market-adjusted approach (Brown and Warner, 1980) is used to directly test the null hypothesis that average stock returns are the same as the market's return over the same event window. Abnormal returns are simply the difference between the stocks' actual returns and the market's returns, which are defined as the benchmark indexes, as shown in the formula below:

$$AR_{it} = R_{it} - R_{mt} \quad (4)$$

Where R_{it} is the daily stock return and R_{mt} is the market return using the *Shenzhen Stock Exchange Composite Index* and *Shanghai Stock Exchange Composite Index* respectively. Abnormal returns generated by the market adjusted return model are standardized by dividing them by their standard error.

Afterwards, cross sectional regressions are used to model and test hypothesized effects from state ownership and mixed control on insider trading returns (measured as the Cumulative Abnormal Returns). A comprehensive set of firm characteristics (total assets, leverage, dividends etc) are included as control variables as well as governance (private seller, legal, private ownership), market (price earnings, market to book), transaction (payment, diversify) and year (8 years, year joining WTO). These variables are defined and explained in detail in Table 1. The following regression model is specified to test hypothesis 2, state ownership and hypothesis 3, mixed control:

$$CAR_i = C + B_1 \text{ State Ownership} + B_2 \text{ Mixed Control} + B_3 \text{ Governance} + B_4 \text{ Firm Characteristics} + B_5 \text{ Market} + B_6 \text{ Transaction} + B_7 \text{ Year Controls} + \text{error} \quad (5)$$

5. Sample Data

This sample of takeover deals occurring between 1998 and 2005 is obtained from the China M & A and Asset Restructuring database (from GTA Information Technology Company (GTA)). Originally, there are 9522 deals in the database population. After deleting the

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private deals, bidder has 2742 firms, and target has 2878 firms. Both successful and unsuccessful offers are included subject to the following selection criteria:

1. Are publicly traded on China's Shanghai Stock Exchange and the Shenzhen Stock Exchange with available price and return data during the event estimation period.
2. Only the first announcement deal if an acquirer makes multiple M & A deals.
3. Only equity deals.

Furthermore, deals are excluded with the following criteria:

4. Deals in which the transaction size is 1% or less than the acquirer's asset value.
5. Any firm that is listed as Special Treatment (ST*) which are firms that should be de-listed but are not.
6. Firms belonging to highly regulated industries, such as banking and financials, railroad, utilities and real estate.
7. Partial acquisitions, acquisition of assets, asset divestiture and debt restructuring.

The final sample size of eight years of M & A is 1343 acquiring firms and 2074 target firms. Table 2 provides a detailed account of the final sample from the initial population of M & A deals.

Table 1: Definition of Variables for Conditional Analysis

	Variable Name	Measure	Rationale
	MARKET PERFORMANCE	CAR	Dependent variable, Cumulative Average Abnormal Returns
1	STATE	Percent of state shares	Level of state ownership as control variable
2	RELATIVE SIZE	Deal size divided by total assets of bidder	Larger deals tend to hurt value
3	LEGAL	Percent of legal institution owned shares	Supportive evidence from IPO-performance literature
4	MIXED CONTROL	Are firms identified as having state plus tradable A shares of less than 50 percent	Mixed governed firms could gain the most from past poor performance from takeovers.
5	SIZE	Log of Total Assets	Typical control variable
6	A-SHARES	Percent of Tradable A shares owned	Privatization benefits from more private ownership
7	LEVERAGE	Debt to Asset ratio	Debt imposes a performance burden
8	ROS	Return on Sales calculated as Net Income / Sales	Profitable firms should confer synergistic benefits in takeovers
8	EXCHANGE	Dummy variable to identify Shanghai versus Shenzhen Exchange listed firms	Control variable
9	PRIVATE TARGET	Dummy variable to identify if a target is a private (not publicly traded) or not	Privatization benefits from ownership of a private firm
10	IPO-AGE	Number of years the takeover takes place since IPO listing	Control variable for age of the firm
11	PRE-WTO	Dummy variable to identify those deals which occurred before Dec 2001 when China is admitted to the World Trade Organization (WTO)	Control variable for large macro economic events
12	DIVERSIFY	Dummy variable to identify deals which are diversification takeovers	Benefits from diversification are found in 1960s decade
13	DIVIDENDS	Dividends paid per share	Dividends are significantly related to asset pricing (Huang and Eun, 2007)
14	FOREIGN	Percent of Foreign shares owned	Foreign ownership signal quality and should confer benefits (Huang and Eun, 2007)

Table 2: Data Sample of Chinese M & A Deals (1997 - 2005)

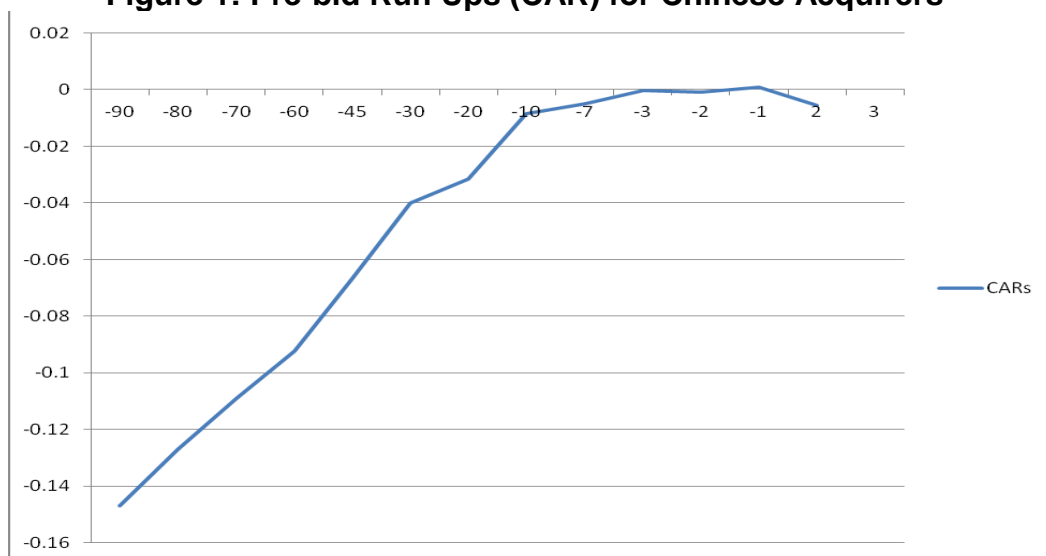
	Bidder	Target
Original number of M & A Deals:	9522	9522
After collecting based on available stock prices:		
Less Private	6780	6644
Sample size	2742	2878
Screen out by:		
Industry	114	147
multiple deal	514	657
Special Treatment status*	60	
Relative transaction size	771	0
Total Screen out	1459	804
Final Sample	1343	2074

* Special treatment status are public firms that are supposed to be delisted mainly because of poor market performance. However, government policy prevents delisting of such companies and labels them with special treatment status in which the symbol of the listed company's name is preceded with "*ST...symbol".

6. Results and Discussion

Clearly, there are pre bid run ups for Chinese acquirers as seen in Figure 1 below. There is a strong pattern of run up going as far 90 days before the takeover announcement. This pattern of run up is noteworthy for the fact that it occurs well ahead of announcement, and because the magnitude is not trivial, it is about 15 percent. This run up pattern for Chinese acquirers is distinct from other insider trading studies on other countries.

Figure 1: Pre-bid Run Ups (CAR) for Chinese Acquirers



Formally, the cumulative abnormal returns for pre bid CAR windows months leading into the announcement date are reported in table 3. The longest pre-bid CAR (-90, 0) shows that

the run up is 14.7 and 15.2 percent respectively, and this is very significantly different from zero ($p < .01$). Indeed, all pre-bid windows consistently show highly significant ($p < .01$) CARs leading to takeover announcement ranging from -15.5 to -5.2 percent. Interestingly, the -60 to +60 CAR window shows a run up return of 23 percent which is very substantial.

Table 3: Insider Trading Cumulative Abnormal Returns for Acquirers

Table reports the pre-bid cumulative abnormal returns (CARs) prior to takeover announcements for acquirer firms in China. The various CAR windows are estimated using three methods: market model and market adjusted model using both value weighted and equal weighted indexes of the Shanghai Composite Index and the Shenzhen Composite Index. t-statistics are reported below the CARs in parenthesis (). Significance is reported at the 10, 5 and 1 percent level respectively as ***, **, *.

CAR Window		Market Model		Market Adjusted Return Model	
		Equal Weighted	Value Weighted	Equal Weighted	
-90 to 0	mean	-0.147 ***	-0.152 ***	-0.070 ***	
	t stat	(-3.45)	(-3.66)	(-3.63)	
	Std Dev	1.556	1.514	0.702	
-60 to -30	mean	-0.052 ***	-0.055 ***	-0.155 ***	
	t stat	(-3.76)	(-4.00)	(-3.84)	
	Std Dev	0.509	0.502	1.469	
-60 to 0	mean	-0.092 ***	-0.097 ***	-0.095 ***	
	t stat	(-3.24)	(-3.46)	(-3.49)	
	Std Dev	1.040	1.021	0.998	
-60 to -3	mean	-0.093 ***	-0.071 ***	-0.095 ***	
	t stat	(-3.46)	(-3.64)	(-3.69)	
	Std Dev	0.977	0.715	0.935	
-45 to -3	mean	-0.067 ***	-0.097 ***	-0.057 ***	
	t stat	(-3.39)	(-3.68)	(-4.18)	
	Std Dev	0.724	0.956	0.495	
-45 to 0	mean	-0.067 ***	-0.072 ***	-0.071 ***	
	t stat	(-3.09)	(-3.34)	(-3.37)	
	Std Dev	0.788	0.780	0.765	
-60 to -60	mean	-0.222 ***	-0.230 ***	-0.225 ***	
	t stat	(-3.83)	(-4.14)	(-4.23)	
	Std Dev	2.122	2.030	1.941	
n		1334	1334	1334	

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Similarly, there are pre bid run ups for Chinese targets in Figure 2 below. As clearly shown, there is also a strong pattern of run up going as far 90 days before the takeover announcement. This pattern of run up is noteworthy for the fact that it occurs well ahead of announcement. The magnitude of this run up is much lower compared to the acquirer case; it is about 4 percent. This run up pattern for Chinese target is again distinct from other insider trading studies on other countries.

Figure 2: Pre-bid Run Ups (CAR) for Chinese Targets

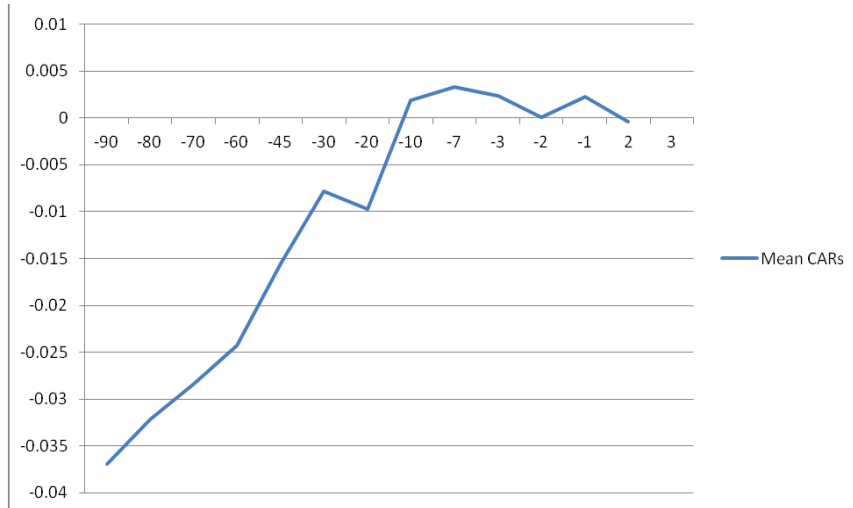


Table 4: Insider Trading Cumulative Abnormal Returns for Targets

CAR Window		Market Model		Market Adjusted
		Equal Weighted	Value Weighted	Return Model
		Equal Weighted	Value Weighted	Equal Weighted
-90 to 0	mean	-0.016 **	-0.044 ***	-0.042 ***
	t stat	(-3.23)	(-3.23)	(-3.21)
	Std Dev	0.232	0.613	0.597
-60 to 0	mean	-0.024 **	-0.031 ***	-0.031 ***
	t stat	(-2.39)	(-3.26)	(-3.34)
	Std Dev	0.462	0.438	0.419
-60 to -30	mean	-0.027 ***	-0.024 ***	-0.024 ***
	t stat	(-3.01)	(-3.67)	(-3.56)
	Std Dev	0.407	0.298	0.301
-45 to -3	mean	-0.018 ***	-0.034 ***	-0.034 ***
	t stat	(-2.64)	(-3.86)	(-3.95)
	Std Dev	0.311	0.396	0.395
-45 to 0	mean	-0.015 *	-0.022 ***	-0.020 ***
	t stat	(-1.91)	(-2.92)	(-2.83)
	Std Dev	0.368	0.342	0.326
-60 to -60	mean	-0.063 ***	-0.075 ***	-0.067 ***
	t stat	(-3.54)	(-4.31)	(-4.01)
	Std Dev	0.810	0.787	0.764
n		1334	1334	1334

Table reports the pre-bid cumulative abnormal returns (CARs) prior to takeover announcements for target firms in China. The various CAR windows are estimated using three methods: market model and market adjusted model using both value weighted and equal weighted indexes of the Shanghai Composite Index and the Shenzhen Composite Index. t-statistics are reported below the CARs in parenthesis (). Significance is reported at the 10, 5 and 1 percent level respectively as ***, **, *.

For targets, the pre bid CAR windows months leading into the announcement date are reported in table 4. The longest pre-bid CAR (-90,0) shows that the run up is 4.4 percent respectively, and this is very significantly different from zero ($p < .01$). Indeed, all pre bid windows consistently show highly significant (mostly $p < .01$) CARs leading to takeover announcement ranging from -4.4 to -1.5 percent. The -60 to +60 CAR window shows a run up return of 6-7 percent. Target firm run ups appear to be *different* (lower than) the M & A literature which documents a price run-up premium to be between 13.3 and 21.8 percent leading to the announcement date (Martynova and Renneboog, 2008).

These patterns of long pre bid run up periods before announcement could be explained by state intervention in China's takeover markets. The Chinese government imposes very high involvement in M & A deals compared to North America in which government involvement only occurs if the merging companies create market monopoly issues. Similarly, the National People's Congress of China added an anti-monopoly law on August 30th, 2007. Multiple government agency approvals are required when state-owned shares are transferred involving agencies such as the State Asset Administration Bureau, State Economic Restructuring Commission and the provincial government. Government agencies review each individual case, and the approval depends on the deal's characteristic, intended target of industry, scale of total investment, and the target's background. Although M & A deals require early pre-approval from many different government authorities, the final stage of the approval rests with the Ministry of Commerce (MOFCOM) which acts as a gatekeeper for social and economic objectives of takeovers.

6.1 State Ownership and Control Effects on Insider Returns

The sources of insider CAR performance are examined by using the run up returns as a dependant variable in cross sectional OLS regressions. Table 5 presents results on these sources of acquirer CARs. Here, state ownership has a negative effect (-.530) on insider CAR returns which is significant ($p < .10$). Additionally, legal ownership shows a stronger negative effect (-0.618) on CAR returns and is also significant ($p < 0.05$). A salient feature of governance in Chinese firms is the presence of legal institution shareholders which are usually owned by central or local governments. Hence, legal ownership can be seen as another form of state control. Thus, it is not surprising that this would similarly have a negative effect on insider returns. These results show that mixed control has no significant effect on insider trading returns. In this case of acquirers, our hypothesis that mixed control has a positive effect on insider trading returns cannot be rejected.

Interestingly, the age of the firm (IPO Age) has a clear and highly significant positive effect (0.028-0.035) on pre bid run up returns which is highly significant ($p < .01$). This implies that older acquirers tend to have higher pre bid return profits. This suggests that, whether the explanation is insider trading or market anticipation, insider trading profits are higher with better known, older, and more established Chinese firms making takeovers.

Now, sources of insider CAR performance are again presented for Chinese target firms in Table 6. Here, state ownership has no significant effect on insider CAR returns. This is similarly true for legal ownership as well. This implies that state ownership has no effect, not even a negative effect on insider returns (to deter insider trading) in the case of targets. The most typical control structure is mixed governance in Chinese firms. Results show that mixed control has a significant ($p < .05$) and positive (0.046 to 0.056) effect on insider trading returns. Our hypothesis that mixed control has no positive effect on insider trading returns is therefore rejected. This is consistent with the rationale that mixed control firms allow private inside owners to create profit opportunities for insider trading.

Table 5: Determinants of Insider Trading CARs for Acquirers

This table presents the results of OLS regression (White's Test) of determinants of pre-bid takeover performance for acquirers for deals taking place from 1997 to 2005. The dependent variables of the regressions are pre-bid CAR return windows of (-60,0), (-45,0). Cumulative Abnormal Returns are estimated using market model equally-weighted index. The main variable of interest is: 1) state ownership which is defined as percentage of state ownership, and 2) mixed control which is defined as firms with state and private control ownership totaling 50 percent or less. t-statistics are reported below coefficients in (). ***, **, and * denote significance at the 1%,5%, and 10% level, respectively.

Variable	DV: MMEW (-60,0)	DV: MMEW (-45,0)
	Coefficient	Coefficient
State Ownership %SOE	-0.530 *	-0.355
	(-1.83)	(-1.49)
Legal Ownership %Legal	-0.618 **	-0.458 **
	(-2.14)	(-1.94)
A Share Ownership %	-0.635 **	-0.433 *
	(-2.09)	(-1.74)
Foreign share ownership %	-0.724 **	-0.571 **
	(-2.10)	(-2.03)
Mixed Control firm (1/0)	0.067	0.070
	(1.18)	(1.51)
Age since IPO	0.035 ***	0.028 ***
	(6.40)	(6.24)
Private target	-0.070	-0.041
	(-1.05)	(-0.75)
Relative size with target	-0.037	-0.038
	(-0.38)	(-0.46)
Payment	0.049	0.093
	(0.13)	(0.31)
Size: Total Asset Log	0.016	0.006
	(0.97)	(0.47)
Debt to Asset	0.032	0.018
	(1.30)	(0.90)
ROS	0.001	0.001
	(0.53)	(0.50)
Common Dividends	0.000 ***	0.000 ***
	(2.69)	(4.50)
Pre WTO membership	-0.012	-0.012
	(-0.40)	(-0.50)
No. of Observations Used	984	984
R-Square	0.0785	0.0841

Table 6: Determinants of Insider Trading CARs for Targets

This table presents the results of OLS regression (White's Test) of determinants of pre-bid takeover performance for targets for deals taking place from 1997 to 2005. The dependent variables of the regressions are pre-bid CAR return windows of (-60,0), (-45,0). Cumulative Abnormal Returns are estimated using market model equally-weighted and value weighted indexes. The main variable of interest is: 1) state ownership which is defined as percentage of state ownership, and 2) mixed control which is defined as firms with state and private control ownership totaling 50 percent or less. t-statistics are reported below coefficients in (). ****, ***, **, and * denote significance at the 0.1%, 1%, 5%, and 10% level, respectively.

Variable	DV: MM VW (-60,0)	DV: MMEW (-45,0)	DV: MM VW(-45,0)
	Coefficient	Coefficient	Coefficient
State Ownership %SOE	0.079	0.102	0.088
	(0.89)	(1.53)	(1.31)
private buyer	-0.015	-0.017	-0.018
	(-0.43)	(-0.65)	(-0.68)
Legal Ownership %Legal	-0.008	0.037	0.033
	(-0.09)	(0.57)	(0.50)
A Share Ownership %	0.068	0.101 *	0.086
	(0.84)	(1.66)	(1.41)
Foreign share ownership %	-0.684	0.071	-0.213
	(-0.38)	(0.05)	(-0.16)
Mixed Control firm (1/0)	0.056 **	0.047 **	0.046 **
	(1.98)	(2.21)	(2.12)
Expropriation Wedge	-0.043	-0.038	-0.040
	(-1.02)	(-1.20)	(-1.23)
Age since IPO	0.012 ****	0.011 ****	0.011 ****
	(4.01)	(4.93)	(5.07)
Size: Total Asset Log	0.010	0.005	0.007
	(1.11)	(0.77)	(1.08)
Debt to Asset	-0.044 *	-0.019	-0.018
	(-1.71)	(-1.00)	(-0.91)
ROE	-0.003	-0.004	-0.004
	(-0.71)	(-1.19)	(-1.14)
Common Dividends	0.048	0.043	0.066
	(0.38)	(0.46)	(0.69)
market_book_equity	0.000	0.000	0.000
	(-0.51)	(-0.91)	(-0.87)
PE	0.000	0.000	0.000
	(-0.19)	(-0.17)	(-0.26)
Diversify deal	0.023	0.006	0.001
	(1.17)	(0.39)	(0.05)
Relative size with Acquirer	0.000	-0.001	-0.001
	(-0.01)	(-0.33)	(-0.75)
exchange traded (Shanghai/ Shenzen)	-0.028 *	-0.018	-0.022 **
	(-1.91)	(-1.63)	(-1.95)
Year 1-8 Controls	YES	YES	YES
Number of Observations	1537	1537	1537
Used			
R-Square	0.0433	0.0355	0.0462

6.2 Robustness

In these event studies, takeover performance is estimated using several models: market model, market-adjusted, and mean adjusted return models. Further, cumulative abnormal returns (CARs) are estimated using both equally weighted and value weighted indexes as benchmarks. All of these models yield similar high positive CARs which are highly significant ($p < .01$) for acquirers and targets. With respect to the conditional results, numerous specifications and alternate measures are tested in the regression models. OLS regressions are performed using both market model and market adjusted model CARs (with equal and value weighted indexes). All regressions are estimated using White's correction for heteroschedasticity. Multi-collinearity between independent variables is of low concern because all the variables of interest have non-significant correlations which are also less than 0.50. In sum, these conclusions are robust in spite of using this variety of estimations, tests, and models.

7. Conclusion

Although there is a substantial amount of literature on mergers and acquisitions, there is relatively scant literature on the Chinese market for corporate control. This market offers a rich, puzzling and distinct country context to study acquisitions in which much research is needed. For example, the political economic context in which there is state ownership in most Chinese firms often plays a significant role in understanding corporate finance. In particular, there is no study on M & A that examines insider trading and pre bid run ups prior to takeover announcement. Thus, this aspect is studied by looking at pre bid cumulative abnormal returns for both acquirer and target Chinese firms. This study's results show a distinct pattern and magnitude of run ups for a sample of Chinese firms. Surprisingly, this pattern shows run ups occurring a relatively long time before announcement (90 days), and that the magnitude of the run up is much higher for the acquiring firm compared to the target firm. Furthermore, conditional analyses show that state and legal ownership has negative effects on insider return profits in acquirers as hypothesized. This is consistent with the rationale that state/legal owners tend to avoid insider trading to avoid personal liability and to comply with state regulations. Mixed control firms show positive effects on insider return profits for targets as hypothesized. This too is consistent with the rationale that mixed control firms provide opportunities for private owners to engage in insider trading. This study contributes to the overall M & A literature by highlighting the role of country context and specifically, state ownership influences on insider trading profits.

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Endnote

¹ China cracks down on cunning tactics of insider trading but retail investors remain wary. Published online February 5th, 2016. Daniel Ren. South China Morning Post International Edition. <http://www.scmp.com/business/companies/article/1909838/china-cracks-down-cunning-tactics-insider-trading-retail>

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