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# Resource Seeking, State Ownership and Long-term Acquirers' Returns of Chinese Cross-border Mergers and Acquisitions

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### Abstract:

This study investigates the long-term acquirer returns of Chinese cross-border mergers and acquisitions (CBM&A) over the period of 1998-2008. Using Buy and Hold and Calendar Time methods, we find that Chinese acquiring firms experience negative returns ranging from 2.92% to 10.80% in 12-month and 60-month post-event periods respectively. Regarding the factors influencing returns, state ownership (SOE), interaction between R&D and SOE, formal institutional distance, acquirer size have positive and significant impact on the long-term acquirer returns. However, interaction between tangible resources and SOE and acquirer cash holding appear to have negative and significant impact on long-term returns. Overall, our results suggest that the role of government through SOEs is an important source of value creation for CBM&A in Chinese emerging economy.

### **1** Introduction

Chinese firms are increasingly expanding their global reach through cross-border mergers and acquisitions (CBM&A) activity in recent years. In 2005, 274 Chinese companies valued at \$5.3 billion were involved in CBM&A (UNCTAD, 2006). The value of acquisitions quadrupled to \$20.7 billion in 2006 (Global Agenda, 2007) and reached \$34.355 billion in 2011 (UNCTAD, 2012). Although, the rising CBM&A phenomenon has important implications for the long-term operations and financial restructuring of the firms involved, yet we know relative little in terms of whether CBM&A create long-term value for Chinese acquirers. Our understanding of the long-term value effects of international mergers and acquisitions is primarily based on studies carried out in the advanced market economies such as United States, United Kingdom and other Western European countries. However, it is pertinent to point out that emerging economy firms are different from advanced country firms in terms of the motivation to undertake CBM&A. For example, emerging economy firms such as those of China are motivated predominantly by the need to seek strategic assets and market development (Boateng, Wang and Yang, 2008). The resource seeking behaviour of Chinese firms is due to the lack of high-end technologies, the availability of cash and the Chinese government "go abroad" strategy implemented by Chinese government where the government provides a "helping hand" to Chinese firms in specific sectors (Du and Girma, 2010). It raises a question whether strategic asset-seeking by CBM&A with the government support and the availability of cash to Chinese acquirers create wealth for acquirers in the long run given that most acquisitions are cash deals (Boateng and Bi, 2013). Debates on the impact of strategic asset seeking and free cash flows on firm value are well-documented in both management and finance literature (see Yiu, Lau, and Bruton, 2007; Wang, Hong, Kafouros, and Wright, 2012; Roll, 1986; Jensen, 1983 for excellent review). Secondly, governments in emerging economies exert considerable influences over business compared to their counterparts in advanced countries (Shimizu, Hitt, Vaidyanath, and Pisano, 2004; Tsui et al., 2004)). Hitt et al. (2004) point out that Chinese government's authority over businesses is pervasive, institutional constraints and incentives are the bases for Chinese firms' strategic decisions such as merger and acquisition decisions. The issue of whether strong government involvement leads to better post-acquisition performance remains relatively unexplored in China. Yet Leone (1986: 6) apply points out that "the acts of government create individual winners and losers in the marketplace". Institutions defined as "the rules of the game" help shape the strategies, structures, and competitiveness of firms (North, 1990). The role of an institution within an economy is to reduce both transaction and information costs thereby reducing uncertainty, establishing a stable structure that facilitates interaction and allows enterprises to move beyond institutional barriers with positive implications for firm

performance (see Oliver, 1991). The ability of CBM&A to generate profits for acquirers varies across international markets since the quality of resources and institutional environment differs from country to country (formal institutional distance). For example, Chan, Isobe and Makino (2008) suggest that the reservoir of learning provided by targets in more institutionally developed countries constitutes a significant value for firms from emerging countries. Despite this, prior literature have largely ignored the importance of institutional factors and concentrated on traditional economic factors in analysing the factors influencing post-acquisition wealth creation. We argue that it should come as something of a surprise if corporate managers in emerging economies did not respond to changes in institutional rules, the role of government and their potential effects on long term returns of shareholders. It is important, a set of factors peculiar to emerging economy firms are employed to examine post-acquisition performance. This study attempts to bridge this gap by employing factors unique to emerging economies such as state ownership, interaction between SOEs and resource seeking acquisitions (priority sector)<sup>1</sup> and formal institutional distance variables to examine the impact of Chinese government involvement on the longterm acquirers' returns. We do so by using buy and hold abnormal returns (BHAR) and Calendar Time Abnormal Returns (BHAR).

We find that Chinese acquiring firms experience negative returns ranging from 2.92% in 12month post-event period to 10.80% in 60-month post-event period. Regarding factors influencing returns, state ownership, interaction between R&D and SOE, formal institutional distance, acquirer size have positive and significant impact on the long-term acquirer returns. However, interaction between tangible resources and SOE and acquirer cash holding appear to have negative and significant impact on long-term returns. The study contributes to the literature in two important ways. This study constitutes one of the first attempts to examine

<sup>&</sup>lt;sup>1</sup> The priority sector (resource seeking) in this study include: minerals, petroleum, research and development (R &D) (Deng, 2004; Cai, 1999; Wu and Sia, 2002)

the impact of the role of government and institutions on long-term returns of Chinese acquirers. Given the significant role of government in Chinese CBM&A decisions, unique institutions and China as a top acquiring country, this study is essential and timely. The study offers insights into how variations in institutional factors, the interaction of SOE and different resources (tangible and intangible) affect acquirer long-term returns. Understanding the role of government in CBM&A serves as a lesson for policy makers and senior managers in other emerging countries regarding the policy directions in their quest to become influential players in global market for corporate control. The study also provides evidence on whether unique characteristics of Chinese firms such as size, availability of cash impact on long-run returns. The study therefore contributes to the institutional theory, free cash flow hypothesis and CBM&A performance discourse.

The remainder of the paper proceeds as follows. The next section reviews the relevant literature and develops the hypotheses of the study. Following that is an outline of data used and methodology employed to examine long-term returns. Section 4 reports the results and discusses the finding. Section 5 concludes the paper.

#### 2. Literature Review and Hypothesis Development

### 2.1 CBM&A and Performance

The literature on CBM&A is replete with studies that evaluate the merger outcome and factors that influence the long-term returns. The studies analysing the CBM&A have suggested a number of factors that may account for wealth creation. Buckley and Casson (1976); Morck and Yeung (1992) contend that firms engaged in CBM&A activities may extract abnormal returns from cross-border investments through internalisation and exploitation of unique firm-specific assets to take advantage of market imperfections. Other

studies suggest that CBM&A provide integration benefits of internalisation, synergy, risk diversification and create wealth for acquiring firm shareholders (Kang, 1993; Markides and Ittner, 1994). Despite the numerous studies on the acquirers' performance, evidence suggests that returns to acquirers are evenly distributed between studies that report negative abnormal returns and slightly positive cumulative abnormal returns. For example, in their review studies, Jensen and Ruback (1983), Jarrell, Brickley and Natter (1988) concluded that acquiring firms tend to enjoy positive performance. Conversely, Roll (1986); Andrade, Mitchell and Stafford (2001); Moeller, Schlingemann and Stulz (2004) found some evidence that the value of bidding firm decreases or that M&As exert no impact at all leading to a socalled underperformance puzzle. Bruner (2002) reported that out of 44 studies on acquiring firm performance he reviewed, 20 studies reported negative returns for the bidders and 24 studies reported positive returns confirming that the research evidence so far have produced mixed results. The above studies were in the context of developed countries M&A activities. In the context of China, studies such Boateng, Wang and Yang. (2008); Feng and Wu (2001); Bhagat, Malhotra and Zhu (2011) have examined performance of CBM&A. Our analysis of these studies suggests similar factors used in the studies of CBM&A in the context of developed country firms are often replicated in the studies of emerging economy firms. Yet a number of studies such as Luo, Xue and Han (2010); Peng, Wang and Jiang (2008) have documented that Chinese government are behind the rise in outward mergers and acquisitions. Recent studies that examined the effects of state ownership relative to private owned enterprises in China on M&A performance are that of Bhabra and Huang (2013) and Zhou, Guo, Hua, and Doukas, (2012). Zhou, Guo, Hua, and Doukas (2012) find that significant gains accrue to M&As by Chinese firms because of preferential government policy and financial support from Chinese government to SOEs. Using a sample of 136 domestic and cross-border deals over the period of 1997-2007, Bhabra and Huang (2013) examined

performance of Chinese acquirers. They find that SOE and cash acquirers experience significant positive abnormal stock returns around the announcement date and over the three-year post-acquisition period. However, both Bhabra and Huang (2013) and Zhou, Guo, Hua, and Doukas (2012) studies did not examine factors such as cash holding and whether the interaction between SOEs and the firm resource seeking behaviour encouraged by Chinese government, maximise shareholder wealth in the long-term. This study extends these studies by employing formal institutional distance, cash holding, interaction between SOEs and the firm resource seeking behaviour to explore CBM&A by Chinese firms.

#### 2.2 Institutional Theory and CBM&A Activities

The central premise of institutional theory is that organisations are embedded in, and thus must conform to the institutional framework to gain legitimacy (DiMaggio and Powell, 1983; Kang and Jiang, 2012). A number of researchers suggest besides firm and industry level factors, firms need to consider wider influences from sources such as the state and society when crafting and implementing their strategies (Oliver, 1997). According to North (1990:3), institutions are "the rules of the game in a society", and consist of "any form of constraints that human beings devise to shape human interaction". Peng (2003) points out that institutional environment may exert an impact on the strategic decisions made by firms and consequently the performance. In the context of China, there is a high level of government has, to a great extent, played a crucial role in shaping the structure of the country's approved outward investment'. While a number of studies point out the importance of the role of government and institutions in the internationalisation of Chinese firms (see Wang, Hong, Kafouros and Wright, 2012; Cui and Jiang, 2012), prior studies have ignored their impact on CBM&A performance. In this study, we attempt to fill this gap.

Another issue that has also not been tested in China but potentially may have impact of CBM&A outcome is firm unique financial capability. Peng and Luo (2000) suggest that benefiting from a relationship with government is constrained by firms' financial capabilities. For example, large firms with enormous resources are more likely to take advantage of government ties (Sun, Mellahi, and Thun, 2010) and even take advantage of government support by actively affecting new policies in China (Luo, Xue and Han, 2010). In contrast, small firms with weak resources are less likely to take full advantages of state support due to limited capabilities. In addition, Chinese firms with high proportion of state ownership tend to have more political connections and gain more benefits by conforming to government direction to acquire strategic resources abroad. This also has implications for acquirer returns and hence, it is important to examine the impact of firm financial capability and government involvement.

#### **2.3.** Hypotheses Development

#### 2.3.1 State Ownership

Despite the three decades of reforms, SOEs remain an important feature of Chinese economy. One of the evidences of the SOEs dominance is that SOEs appear to have a stake in most of Chinese listed firms (Chen, Firth, and Xu, 2009). Therefore, listed firms conducting CBM&A are large public listed firms with Chinese government owning most shares (Lau et al., 2007). A number of studies have documented that firms with state ownership tend to face fewer financial constraints when conducting outward investment compared to privately owned firms (Lin and Bo, 2012). For example, Poncet, Steingress and Vandenbussche (2010) find that private firms in China face severe financial constraints on investments while SOEs do not after a research on 20,000 Chinese firms. In addition, the Chinese financial market is dominated by the four large state-owned banks and SOEs have preferential access to banks loans administered by the big four banks (Cull and Xu, 2003). Recent studies by Zhou, Guo, Hua, and Doukas, (2012) and Bhabra and Huang (2013) find a positive and significant performance for SOE acquirers compared to their private peers. Calomiris, Fisman and Wang (2010) arrived at the same conclusion regarding the relationship between SOEs and firm value in the long-term. The above argument leads to our second hypothesis:

**Hypothesis 1**: Acquiring firms that are dominantly state-owned will generate more positive long-term returns compared with privately owned acquirers.

### **2.3.2 Formal Institutional Distance**

It is argued that the potential for CBM&A to generate profits for acquirers varies across international markets since the quality of resources and institutional development differs in the host country markets in which the transactions are conducted (Gubbi et al., 2010). Meyer et al. (2009) suggest formal institutions enable firms to conduct market transactions without incurring undue cost or risk, generating positive impact on firm value. Berry (2006: 1125) contends that markets with more developed institutions are likely to offer, inter alia, "location with less risk....where knowledge can be acquired or learned, and more institutional protection for investments". Specifically, conducting CBM&A in more institutionally developed economies with the feature of competitive market and customer-centric focus, tend to gain a rich reservoir of cutting-edge technology and other resources that can subsequently be internalised in different markets and at home. Tsang and Yip (2007) point out that the level of economic and institutional development is positively associated with the quality of resources in different countries. Advanced and more institutionally developed countries tend to be superior venues to acquire knowledge-based resources such as high technology and R&D. Gubbi et al. (2010) find a positive relationship between institutional distance and value creation for Indian acquirers. Given that there are no existing studies examining explicitly the

impact of institutional distance between China and target countries, an examination of the effects of institutional distance on long term acquirers' returns appears warranted to shed light on the extent to which Chinese institutions after reforms have bridged the gap with other countries. Accordingly, our hypothesis is formulated as follows:

**Hypothesis 2:** Chinese acquirers engaged in CBM&A activities in developed institutional environment will generate positive long-term returns.

### 2.3.3 Large Cash Holding

Free cash flow hypothesis posits that top management tends to invest free cash flows in projects with negative net present value instead of projects maximizing shareholders' wealth (Jensen, 1986). Subsequent studies such as Harford (1999) and Oler (2008) have generally rendered support to free cash flow hypothesis. For example, Oler (2008) investigated whether an acquirer's pre-announcement cash level can predicate post-acquisition returns and find that acquirer's cash level has a negative and significant impact on acquirer's returns. Managers make error in valuating target and overpay for acquisitions leading to poor long term performance. According to Roll's (1986) hubris perspective, the over-confident managers over estimate their capability to extract acquisition profits and thereby pay large premiums (Hayward and Hambrick, 1997). This is especially severe when the firms hold large amount of cash. In the context of China, Boateng and Bi (2013) point out that, most Chinese acquirers tend to have large cash reserves. Furthermore, in order to support Chinese firms to compete in global market as latecomers, Chinese government tends to provide lowcost loans to firms in specific sectors to facilitate the CBM&A (Scissors, 2011; Du and Girma, 2010). Given the large cash holdings and generous government financing support to Chinese acquiring firms, it is important to examine whether cash flow has an explanatory power in a

series of high profile acquisition failures such as TCL acquisition of Thomson's TV of France. The above discussion leads to the following hypothesis:

**Hypothesis 3**: Large cash holding is negatively related to long-term acquirer returns of Chinese CBM&A

### 2.3.4 Acquirer Size

The finance literature documents that firm size is another factor influencing post-acquisition performance of M&As. It is argued that large firms have already developed a completed mature way to organise themselves, such as along divisional structures and other formal organizational forms, which is different from small medium enterprises (SMEs) where informal organisational structures are still most common. This implies that CBM&A conducted by firms of different sizes tend to have the organisational consequences which may affect the following post-acquisition performance. Singh and Montgomery (1987) suggest that the larger the firm size, the higher the economies of scale and scope, and consequently the higher the acquiring firms' returns after CBM&A. On the other hand, Moeller, Schlingemann and Stulz (2004) find that the abnormal returns associated with acquisition announcements for small firms exceeds the abnormal returns associated with acquisition announcements for large firms by 2.24 percentage points. In the context of China, the nature of investment abroad which tends to concentrate on resources-seeking makes acquirer size especially important. It is suggested that seeking strategic resources by CBM&A requires enormous resources and capabilities which are more likely to be available to large firms (national champions) in China. In the light of the above, it is hypothesised that: Hypothesis 4: Acquirer size exerts a positive impact on the long-term acquirer returns of

Chinese CBM&A

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#### 2.3.5 Interaction between State ownership and tangible & intangible resources

A number of scholars, including Walter and Howie (2003), Lau et al. (2007) and Chen and Young (2010) argue that political motives are central to the strategic decision-making of state-dominated firms rather than purely profit motives in China. The Chinese government, through its "go abroad" policy, has classified some resource seeking sectors as strategic in line with the national policy goals and these sectors receive more active financial support. Firms that conform to the direction of government policies can more readily access inputs, such as cheaper sources of funds, and other incentives. For example, the Chinese National Development and Reform Commission (NDRC) and China EXIM Bank jointly issued "Notice concerning the policy on providing credit and loan support for overseas projects encouraged by the State" indicating that a low-rate loan will be provided if the FDI projects fulfil at least one of the following requirements: exploring the a natural resource that China lacks (including energy; natural resources in mining, gas and oil); and R&D activity using advanced international technology. Du and Girma (2010) pointed out that the use of SOEs with government support to engage in capital intensive acquisitions where China lacks resources such as R&D and tangible natural resources are common. Despite this, we have incomplete understanding of whether the "go abroad" strategy in which the Chinese government support firms to engage in CBM&A to acquire the scarce resources may lead to positive long-term returns for acquirers. In this study, we argue that SOEs investing in government priority sectors will not only reduce cost of capital but are likely to face less financial constraints and consequently increase firm value in the long-term. In this study, we move beyond the surface and separate resources into tangible and intangible resources. This is because the source of gains from each type of resources may not be similar and the

magnitude of their effects on firm returns may also be different. For example, intangible resources, such as R&D resources have the effect of increasing the production capacity, improve competitive advantage, lower cost and thus increase profits for the acquiring firm in the long-term (Deng, 2009). R&D enables firms to develop innovative technologies to differentiate themselves from international rivals (Kafouros and Buckley, 2008). On the other hand, acquisition of resources such as minerals may augment the supply chain of Chinese firms at home. In China, government influence firm decisions by appointing executives in the SOEs. We expect that the interaction of SOEs and resource seeking behaviour which results in more active support being given in terms tax benefits, direct grants, access to cheaper- or no-interests loans are likely to improve competitive advantage and long-term returns. The argument leads to the following hypotheses

**Hypothesis 5a**: The interaction between state ownership and tangible natural resources acquisitions would have a positive impact on the long-term acquirer returns

**Hypothesis 5b**: The interaction between state ownership and intangible resources acquisitions (R&D) would have a positive impact on the long-term acquirer returns

### **2.4 Control Variables**

Following the M&A literature, several control variables are included in the regression model. A number of studies have demonstrated that the manner in which M&A are financed may be driven by differences in information held by the acquirers and the target regarding the value of the firm (see Fishman, 1989; Eckbo, Glammarino and. Heinkel, 1990; Harford, 1999). We control for method of payment consistent with the study of Loughran and Vijh (1997) who find that acquiring firms with cash payment tend to gain significantly positive excess returns than acquiring firms with stock offers in the post-acquisition period. Firm relatedness is another factor which may affect the acquirer returns. It is pointed out by Singh and Montgomery (1987) that there are three mechanisms which may create value in related M&A: economy of scale, economy of scope, and market power economy. Bhabra and Huang (2013) in their study of Chinese M&A find that firm relatedness has a positive and significant influence on long-term acquirer returns. Deal size may influence firms' post-acquisition performance in that overconfident management who overestimate their capability to extract acquisition benefits tend to bid for larger firms (Roll, 1986; Malmendier and Tate, 2008)) and management tend to overpay for larger acquiring firms because of their high private benefits (Morck, Shleifer and Vishny 1990). Prior experience of CBM&A is likely to affect the ability of firms' perceived risk, recognising and identifying the potential value of CBM&A, and integrating acquiring firms' different culture into their own therefore better the post-acquisition performance. Growth rate is another control variable since highly profitable firms tend to invest abroad as they hold better financial resources (Wang, Hong, Kafouros and Wright, 2012). Following the work of Doukas and Travlos (1988), we control sectors since it is suggested that wealth gains vary across different sectors. In this study, we use two dummy variables to control the impacts of non manufacturing and manufacturing sectors.

#### **3** Data and Research Methodology

#### **3.1 Sample Selection**

The data for this study was obtained from the Chinese Stock Market Research (CSMAR) databases, commercially available at Shenzhen GTA Information Technology Company Ltd. CSMAR is a premier Chinese database jointly produced by the University of Hong-Kong and GTA and the database covers governance and finance structure of listed Chinese mainland firms and Chinese firms engaged in M&As. For each acquisition, the GTA database provides information regarding the acquirer's name, announcement date, target name, target country of origin, deal value, deal type, restructuring type, industry, and other details. Our initial sample is 594 CBM&A within this period. The following restrictions were imposed in order to arrive

at the final sample. First, the acquirer must be listed on the Shanghai or Shenzhen Stock Exchanges under A share, which provides data on CBM&A in China, and the company shares must be actively traded. Second, we exclude all financial firms due to the different nature of their assets and liabilities, different financial reporting systems and unique regulations, all of which may influence firm value and bias results. Third, the bidder must not have been involved in multiple acquisitions to separate effects of each acquisition properly. Fourth, deals must be mergers or acquisitions of majority interest, and the bid represents the first offer by a given acquirer for a given target; we thus avoid overweighting contested deals that would bias our t-statistics upwards. Lastly, the share price data and accounting information of the acquirer must be available from 3 years before the event and 5 years after the event on the CSMAR database.

The imposition of these restrictions led to the final usable sample, which consisted of 222 CBM&A by Chinese bidders. It is important to note that the data from the CSMAR database were compared with the Thomson SDC Platinum M&A database and Datastream. The CSMAR database appears to provide relatively more up-to-date information in terms of the number of acquisitions and stock returns with fewer missing values.

The event firm distribution by year is presented in Table 1. From the table, we can see that there is a growing number of cross-border M&As by Chinese firms in recent years. For example, 2007 and 2008 account for 53.15% of the whole sample during 1998 to 2008.

#### (Insert Table 1 here please)

We further classify the acquiring firms based on their market capitalisation and book to market value (BTMV). In each year from 1998 to 2008, we collect the market capitalisation

from CSAMR database. We then sort sample firms in descending order by market capitalisation and classify them into 10 size deciles with decile 1 containing the largest firms, and deciles 10 containing the smallest firms. Acquiring firms are distributed into proper size deciles based on the market capitalisation in the event year. From Table 2, we can see that 43.69% of the acquiring firms are in the top three size deciles, indicating acquiring firms tend to be large firms. There are 26.12% of the firms are allocated in the smallest three size deciles, representing a relatively small section of acquiring firms tend to be small ones. Besides, BTMV ratios are collected from CSMAR database each year. After that, all the acquiring firms are sorted into 5 groups in ascending order according to BTMV, with Quintile A contains the lowest BTMV firms (Glamour firm), and Quintile E contains the highest BTMV firms (Value Firm). As can be seen from Table 2, the distribution of firms in appropriate BTMV quintiles are much more evenly distributed compared with the market capitalization distribution. There are only slightly more acquiring firms in Quintile E, which represents 23.87% and slightly few acquiring firms in Quintile E, which represents 16.22%.

#### (Insert Table 2 here please)

#### 3.2 Method

Following Barber, Lyon and Tsai (1999); Mitchell and Stafford (2000); Loughran and Vijh (1997), our study uses buy and hold abnormal return (BHAR) to examine Chinese acquirers' long-term performance from 36 months before the event month to 60 months after the event month in order to provide a comprehensive picture of Chinese CBM&A performance.

#### **3.2.1 Buy and Hold Abnormal Returns (BHARs)**

BHAR method assumes that investors buy firms' shares and hold over a period of time, for example, 36 or 60 months. The abnormal return of the event firm is then compared with a

pre-designed benchmark: e.g., size or size/BTMV reference portfolio benchmark. It is argued by Barber and Lyon (1997) that BHAR method seems to correctly measure an investor's investment experience over the examination period. It is argued that the BHAR method appears to correctly measure an investor's investment experience over the examination period (Barber and Lyon, 1997). However, empirical studies, such as Brav and Gompers (1997), Barber and Lyon (1997) and Mitchell and Stafford (2000), have suggested that new-listing bias, rebalance bias, and skewness bias can negatively impact the reliability of the BHAR method. To address these potential biases, we carefully built the benchmarks and applied a bootstrapping method to solve the skewness bias as recommended by Barber, Lyon and Tsai (1999). The benchmarks used in this research are size-decile 10 reference portfolios and 50 size-BTMV (book-to-market ratio) reference portfolios based on all Chinese listed firms recorded in the CSMAR database between 1998 and 2008. This study uses the benchmarks of 10 size deciles reference portfolios and 50 size-BTMV reference portfolios which are built on all Chinese listed firms in CSMAR database from 1998 to 2008. The following section provides the benchmark building process and the calculation of long-term returns over the 36-month pre-event period to 60 months following the event.

### Benchmark 1: 10 Size Deciles Reference Portfolio

The process for constructing 10 size deciles reference portfolio is as follows:

i). Each year, we collect all the A share listed firms in Shanghai Stock Exchange and Shenzhen Stock Exchange that have available Market Capitalization (Tradable Market Capitalization) data under Chinese Stock Market Research (CSMAR) database from 1998 to 2008; ii). At the beginning of each year, we rank all the firms in descending order and divide them into 10 size deciles based on their market capitalization, with decile 1 containing the largest firms, and decile 10 containing the smallest firms. At the beginning of each year, we

re-form the size deciles to allow for the changing of the firms' characteristics; iii). The return for each firm within each size deciles portfolio is tracked from January of year T for 12, 24, 36, 48 and 60 months after the event to form the benchmark to examine the post-event abnormal returns and 12, 24, 36 months before the event to examine the pre-event period abnormal returns; iv). The calculation of the reference portfolio's BHARs will begin at the same month as the event firm's return calculation; v). The 12, 24, 36, 48 and 60 months equal weighted size deciles portfolio returns are calculated and use as BHAR reference portfolio benchmark return.

#### Benchmark 2: 50 Size-BTMV reference Portfolio

The process for constructing 50 size/ BTMV deciles reference portfolio is as follows:

i). We first collect the BTMV ratio from CSMAR database for all the A share listed firms in each year during the period1998-2008; ii). We further sort all firms with a positive BTMV ratio in ascending order in each year and divide them into 5 groups with Quintile A containing the lowest BTMV firms (Glamour firm), and quintile E containing the highest BTMV firms (Value Firm); iii). After this classification, each year we have 50 Size-BTMV reference portfolios (10 size deciles \* 5 BTMV groups); iv). Similar to the size deciles reference portfolio, the return for each firm within each reference portfolio is tracked from January of year T for 12, 24, 36, 48 and 60 months after the event to form the benchmark to examine the post-event abnormal returns and 12, 24, 36 months before the event to examine the pre-event period abnormal returns; v). The reference portfolio's return will start from the same month as the event firm's return calculation. vi). Equally weighted Size-BTMV reference portfolio returns are calculated and used as Size/BTMV reference portfolio benchmark.

Although, our Benchmark 3 is the Size, BTMV and Industry Control portfolio, it is based on

the 50 Size-BTMV reference portfolios described above, but additionally we require that all control portfolio firms to be in the same Chinese Securities Regulatory Commission classification (CSRC) industry group.

Following the method suggested by Barber, Lyon and Tsai (1999), we calculated the reference portfolio's return. We first compound each firm's return over the 12-60 month period and then sum them up to obtain the average return over the examination period; we thereby effectively eliminate the rebalance bias from our calculation. In the process of constructing size or size/BTMV reference portfolios at the beginning of each year, we require that prior size or BTMV data be available in order to be included in the benchmark portfolio to ensure that we do not have new-listing bias in our sample. The return of the reference portfolios are calculated as:

The return of event firm:

$$R = \prod \left( 1 + R_{it} \right) - 1 \tag{1}$$

Where  $R_{it}$  is the monthly return data from CSMAR.

$$R_{RE} = \sum_{i=1}^{n_s} \frac{\prod_{t=s}^{s+t} (1+R_{it})] - 1}{n_s}$$
(2)

Where s is the beginning period, t is the period of investment (in months),  $R_{it}$  is the return on security i in month t, and  $n_s$  is the number of securities traded in months, the beginning period for the return calculation.

Buy and Hold Abnormal Return:

$$BHAR = R - R_{RE} \tag{3}$$

Where *R* is prior event 12-36 months and post-event 12-60 months buy and hold returns for sample firms, and  $R_{RE}$  is prior event 12-36 months and post-event 12-60 months buy and hold returns of benchmark portfolios.

#### **Cross-sectional Regression of BHARs**

To explain the factors affecting the long-term acquirers' returns of Chinese CBM&A, we use the following regression model:

$$BHAR(D_{1} - D_{2}) = \beta_{0} + \beta_{1}(Cashhld) + \beta_{2}(AcqSize) + \beta_{3}(StateOwn) + \beta_{4}(FInsDist) + \beta_{5}(Tan \times SOE) + \beta_{6}(R \& D \times SOE) + \beta_{7}(Payment) + \beta_{8}(Re\ latedness) + \beta_{9}(Experience) + \beta_{10}(DealSize) + \beta_{11}(Growth) + \beta_{12}(Sector1) + \beta_{13}(Sector2) + \varepsilon$$

$$(7)$$

### Variable Measurement

Table 3 shows an overview of the explanatory variables and their brief description and definitions with expected sign.

### (Insert Table 3 here please)

### 4. Results and Discussions

#### 4.1 BHAR Results

Panels A and B of Table 4 report three-year pre-event and five-year post event acquirers' BHARs, the mean scores, and bootstrapped t-statistics for the whole sample of Chinese acquirers using two different benchmarks, i.e. 10 Size deciles reference portfolios and 50 Size-BTMV reference portfolios. In the pre-event period from 12-36 months, acquiring firms experience positive abnormal returns ranging from 5.50% to 3.30% in respect of 10 size

deciles reference portfolios, which are all statistically significant at 1% level. With regard to 50 Size BTMV as a benchmark, the Table suggests that acquirers experience positive and significant abnormal returns for 12 months, 24 months, and 36 months of 6.45%, 1.89%, 4.81% respectively for acquiring firms. The bootstrapped skweness t-test indicates that the results are all statistically significant at 1% level.

Regarding the post-event BHARs, panel A of Table 4 shows that acquiring firms experience negative returns ranging from 2.92% in 12-month post-event time to 10.80% in 60-month post-event period under 10 deciles benchmark portfolio. The negative returns reported above remain unchanged under Size-BTMV reference portfolio. The acquiring firms experience negative returns of 2.18%, 3.89%, 2.53%, 6.64%, 13.85% for 1-year, 2-year, 3-year, 4-year, 5-year post-event period respectively. All the BHARs are statistically significant at 1% level by using bootstrapped skewness t-test. In general, Chinese acquiring firms experience statistically significant positive abnormal returns in the pre-event period while significant negative abnormal returns are recorded after the event in the two benchmark portfolios. The longer the post-event period, the worse the performance of acquiring firms.

### (Insert Table 4 here please)

### 4.2 Robust Check: Calendar Time Abnormal Returns (CTARs)

BHARs method as a standard method for estimating the long-term stock performance has been widely employed in prior studies. However, it is argued that cross-sectional dependence bias of sample returns occurs when BHARs are calculated over long time horizons. Fama and French (1992; 1993) develop a three factor model of constructing monthly portfolios in calendar time to calculate average long-term abnormal returns. It is argued that M&As tend to occur in waves and within a wave M&As are likely to cluster by industry. The monthly calendar time benchmark portfolio could account for the cross-sectional dependence of the long-term abnormal returns of an event firm. Fama and French (1993) find three common risk factors that can explain the cross-section of average stock returns: overall market index factor, firm size factor and book to market (BTM) factor. As suggested by Gregory (1997) and Mitchell and Stafford (2000), Fama and French three-factor model is widely used to calculate the long-term abnormal returns. Therefore, we adopt Calendar Time Abnormal Returns (CTARs) as a robust check of acquirers' long-term abnormal returns. According to Fama and French (1993), the three-factor model is applied by the regression of the post-event monthly excess returns for firm i on market index factor, size factor and book-to-market (BTM) factor. The model is specified as follows:

$$R_{it} - R_{ft} = \alpha_i + \beta_i \left( R_{mt} - R_{ft} \right) + s_i SMB_t + h_i HML_t + \varepsilon_{it}$$
(9)

Where  $R_{it}$  is the calendar time portfolio monthly return of sample firms,  $R_{ft}$  is the one year risk-free interest rate,  $R_{mt}$  represents the return on value-weighted market index,  $SMB_t$  is the return on a value-weighted portfolio of small stocks minus the return on a value-weighted portfolio of big stocks,  $HML_t$  represents the return on value-weighted portfolio of high BTM stocks minus the return on value-weighted portfolio of low BTM stocks. The regression generates parameter estimates of  $\alpha_i$ ,  $\beta_i$ ,  $s_i$  and  $h_i$  where intercept  $\alpha_i$  is the abnormal return of sample stocks compared with other stocks after controlling for market index, size and BTM factors. A positive intercept implies sample firms perform better while negative intercept implies sample firms underperform other stocks.

Table 5 reports the long-term acquirers' returns of Chinese CBM&A using the Calendar Time Abnormal Returns (CTARs). As we can see from the table, the results indicate negative abnormal returns for acquiring firms after CBM&A. The results of CTARs appear similar to BHARs results reported in Table 4 and therefore confirm our findings of CTARs.

(Insert Table 5 here please)

#### **4.3 T-test and Multiple Regression Results**

### 4.3.1 T-test Results: State Ownership versus Private Ownership

Table 6 reports a paired t-test of post-event BHARs for Chinese acquirers classified by ownership type (SOEs) and privately-owned enterprises (POEs). Table 6 shows SOE acquirers have positive mean score of 0.2400 for BHARs. In comparison, POE acquirers have negative BHARs of -0.7568. Our results suggest that state ownership has a positive mean return in the long-term performance after CBM&A. The results provide support for the hypothesis 1 indicating that state-owned firms tend to enjoy more support from the state and perform better than privately-owned firms. In short, the evidence shows that CBM&A create value for state-owned firms compared to privately-owned firms.

### (Insert Table 6 here please)

### **4.4 Correlation Matrix**

The correlation matrix is reported in Table 7. All correlations are relatively low and variance inflation factor (VIF) is below the acceptable level of 10 (Neter, Wasserman and Kutner, 1985). This correlation matrix suggests that multicolliearity appears not to be a problem in this study.

### (Insert Table 7 here please)

#### **4.5 Multiple Regression Results**

Table 8 reports the regression results on factors influencing long-term returns. State ownership, interaction between R&D and SOE, institutional distance, and acquirer size exert a positive and significant impact on the long-term acquirer returns. However, interaction between tangible resources and SOE and acquirer cash holding appear to have negative and significant impact on long-term returns. Model 1 includes the variables representing four hypotheses: cash holding, acquirer size, state ownership and formal institutional distance. Interaction between tangible resources and SOE, and the interaction impact of R&D (intangible) and state ownership are introduced in Models 2 and 3. The Adjusted R<sup>2</sup> ranges from 13.3 -14.4 percent and compare favourably to the results of Kiymaz (2004). The coefficients of cash holding are -0.211 in Model 1, -0.207 in model 2 and -0.214 in Model 3. All of them are highly significant at 1% level. The negative influence of cash holding on long-term post-event acquirer returns is consistent with Jensen's (1986) that cash rich acquirers tend to have negative returns because of strong managerial power and potential agency cost of free cash flow. The coefficients of acquirer size are positive (p < 0.01) in all the three models, which indicate that acquirer size increases long-term acquirer returns. The results also support our conjecture that, the nature of Chinese investments abroad which tends to concentrate on resources-seeking makes acquirer size especially important. The Chinese government through its "go abroad" policy create national champions with huge assets to undertake acquisitions abroad. The positive impact renders supports to the earlier reported findings by Singh and Montgomery (1987) large acquirers earn positive returns in the longterm. Formal institutional distance has positive and significant coefficients as well, 0.191 (p<0.01); 0.196 (p<0.01) in Models 1, 2 and 3 respectively. The results are in accordance

with the findings of Chan, Isobe and Makino (2008) and Gubbi et al. (2010) and support the notion that, acquiring firms from emerging countries with relatively poor formal institutions tend to create value when they engage in CBM&A activities in developed institutional environment. The coefficient of state ownership is 0.138 and significant at 5% level. This finding supports the previous results by Zhou, Guo, Hua and Doukas (2012), suggesting that state ownership play a huge role in increasing firm value in the long term after CBM&A. We enter two-way interaction in models 2 and 3 successively. The interactive term between state ownership and tangible resources is negative and statistically significant suggesting that the government's financial support and other incentives to SOEs for the acquisition of tangible resources tend to have a deleterious effect on long-term acquirer returns. The coefficient of the interactive term is -0.131 and is statistically significant at 10% level. Hypothesis 5a is unsupported. However, hypothesis 5b is supported indicating that government involvement through SOEs to acquire R&D capabilities increase returns in the long term for Chinese firms. The interaction term for R&D and state ownership in model 3 has a positive coefficient of 0.147 and significant at 5% level. The results may be explained by the fact that acquisition of intangible resource tend to enhance long-term competitiveness and generate spill-over effect at home for Chinese firms. The result is consistent with the internalization theory of Buckley and Casson (1976) and Rugman (1981).

#### (Insert Table 8 here please)

#### 5. Conclusions

This study has examined the long-term value creation of CBM&As by Chinese acquirers over the period 1998-2008. Using a sample of 222 acquisitions by Chinese firms involving targets across Europe, North America, Australia and Asia, this study contributes to literature in two fronts. First, it extends the existing literature on long-term value creation of CBM&A from emerging country that has experienced an unprecedented reforms over the past three decades. This study identifies and documents the post-event acquirers' returns and the factors affecting acquires' returns of Chinese CBM&A. Using both BHAR and CTAR to examine the longterm acquirers' returns of Chinese CBM&A, the study find significant negative long-term abnormal returns after the acquisition. Regarding the factors affecting long-term returns, we find that state ownership, formal institutional distance, interaction between R&D and SOEs and acquirer size exert significantly positive impact on the post-event long-term BHARs. However, cash holding and the interaction between the acquisition of tangible resources and SOE have negative and statistically significant effect on post-event long-term acquirer returns. The finding that the interaction of R&D and state ownership has a significant positive impact on firm value appears interesting because the results suggest that in the case of acquisition of R&D, firms pursue the goals of the state and yet maximize the wealth of shareholders in the long-term. This therefore challenges the conventional wisdom in the literature that the mixture of state and firm goals of shareholder wealth maximization is incompatible to value creation of firm. Our tentative conclusion here is that the involvement of political goals and that of firm may maximise shareholder wealth depending the nature of resource desired by the state. The overall implication of this study is self evident suggesting that the role of government is an important source of value creation for CBM&A in emerging countries such as China. In particular, government involvement in CBM&A compensate for the weaknesses of Chinese firms as latecomers. Despite the significant contribution of this study on the role of government more studies appear warranted. Future research should combine data from the top emerging countries such as India, Brazil and China to assess the role of government across emerging countries.

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Year	No.	Percentage
1998	7	3.15
1999	12	5.41
2000	14	6.31
2001	8	3.60
2002	10	4.50
2003	16	7.21
2004	7	3.15
2005	13	5.86
2006	17	7.66
2007	52	23.42
2008	66	29.73
Total	222	100

 Table 1: Sample Distribution by Year

Table 2: Size and BTMV distribution

Size Deciles	No.	Percentage	BTMV Qutl.	No.	Percentage
1(Large)	36	16.22	A(Growth)	45	20.27
2	35	15.76	В	48	21.62
3	26	11.71	С	36	16.22
4	16	7.21	D	40	18.02
5	19	8.56	E	53	23.87
6	19	8.56	Total	222	100
7	13	5.86			
8	11	4.95			
9	20	9.01			
10 (Small)	27	12.16			
Total	222	100			

Table 3: Definition	of Independent Variables
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Variable	Exp. Effect	
StateOwn (State Ownership)	Percentage of equity ownership to total equity by the central government, local government, and governmental agencies and institutions held in a Chinese firm (Lin et al., 1997). Data on firm ownership stakes were collected from the CSMAR database.	+
<i>FInsDist</i> (Formal Institutional distance)	Differences in the institutions between the two economies using the International Country Risk Index. For each target country in our sample, we divide the value for selected indicator for that year by a corresponding value for China, and take the mean across the indicators, such as democratic accountability, government stability, investment climate, corruption, law and order, and bureaucratic quality to obtain the final value. Values >1 signify higher and those <1 reflect lower levels of institutional development relative to China (Gubbi et al., 2010).	+
$R \& D \times SOE$	R&D expenditure deflated by total assets multiply by SOE dummy	+
<i>Tan</i> Re* <i>SOE</i> (Tangible x SOE)	Ratio of tangible assets (the sum of fixed assets and inventories) to total assets multiply by SOE dummy	+
Cashhld (cash holding)	Ratio of cash and cash equivalents to total assets.	-
AcqSize (Acquirer size)	Log of acquirers' total assets in Chinese Yuan.	+
Payment (Method of payment)	A dummy variable equals to 1 if the transaction is financed by cash, $0 =$ otherwise	+
Re latedness	A dummy variable taking the value 1 if acquirer and target are in related industry; $0 =$ otherwise.	+
<i>Experience</i> (Prior Experience)	Number of prior foreign acquisitions made at the time of purchase.	+
DealSize (Deal Size)	Log of the amount paid for the target in Chinese Yuan.	-
Growth (Growth Opportunities)	Tobin's Q	+
Sector1	A dummy variable taking the value 1 if acquirer is in non-manufacturing industry; $0 = $ otherwise	+/-
Sector2	A dummy variable taking the value 1 if acquirer is in manufacturing industry; 0= otherwise	+/-

	ong term briaks	Results for Chil	iese Acqui		
Event		Mean	SD	Bootstrap	P-value
Period				Skewness t-test	
Panel A:	10 Size Decile				
Pre3y	36 Months	3.30%***	0.09	5.22	0.0000
Pre2y	24 Months	0.74%***	0.09	3.02	0.0000
Pre1y	12 Months	5.50%***	0.08	3.63	0.0003
1y	12 Months	-2.92%***	0.03	-3.91	0.0008
2y	24 Months	-3.09%***	0.03	-4.82	0.0000
3у	36 Months	-1.51%***	0.01	-3.53	0.0000
4y	48 Months	-5.61%***	0.05	-5.80	0.0000
5y	60 Months	-10.80%***	0.01	-3.06	0.0000
Panel B	50 Size BTMV				
Pre3y	36 Months	4.81%***	0.09	4.50	0.0000
Pre2y	24 Months	1.89%***	0.09	3.28	0.0000
Pre1y	12 Months	6.45%***	0.08	3.70	0.0004
1y	12 Months	-2.18%***	0.03	3.93	0.0012
2y	24 Months	-3.89%***	0.04	6.52	0.0000
3у	36 Months	-2.53%***	0.05	-4.86	0.0000
4y	48 Months	-6.64%***	0.05	-3.12	0.0000
5y	60 Months	-13.85%***	0.06	-4.94	0.0000

Table 4: Long term BHARs Results for Chinese Acquirers

Notes: No of cases =222; \*\*\*p<0.01

	12 Months	36 Months	60 Months
Market	0.175***	0.065	0.238***
	(0.002)	(0.279)	(0.000)
SMB	-0.493***	-0.569***	-0.632***
	(0.000)	(0.000)	(0.000)
HML	0.049	-0.327***	-0.414***
	(0.356)	(0.000)	(0.000)
Constant	-0.102***	-0.110***	-0.098***
	(0.000)	(0.000)	(0.000)
Adj. R-square	0.333	0.240	0.270

 Table 5: Calendar Time Portfolio Regression Results

## Table 6: Long-term Performance: State Acquirer versus Private Acquirer

Variable			Paired Di	Paired Differences		
	Mean	SD	Mean	SD		
BHAR						
SOE acquirers	0.2400	0.430				
POE acquirers	-0.7568	0.430	-0.7086	1.080	9.774***	

**Notes:** 1. The table reports the differences in performance between (State owned enterprises (SOEs) and private owned enterprises (POEs) 2. \*\*\*P<0.01

#### Table 7: Correlation Matrix

	٨	P	C	D	Б	Б	G	ц	T	т	V	T	м	N	0	
A.Growth	1.00	D	C	D	L	1'	0	11	1	J	K	L	IVI	1	0	
B.Experience	.253***	1.00														
C.DealSize	.110	.007	1.00													
D.Payment	015	.061	0.020	1.00												
E. Relatedness	.114*	005	.183**	030	1.00											
F. Sector 2	.025	001	.178**	.070	.147	1.00										
G. Sector 1	030	103	.194***	.001	.247***	.097	1.00									
H. Cash Hold	,131**	004	095	041	.079	.078	.039	1.00								
I. AcqSize	.337***	.272***	.354***	068	.116*	.125**	.166***	082	1.00							
J. StateOwn	274**	182**	060	.048	045	.066	.095	058	103	1.00						
K.PrivateOwn	.246***	.161**	.065	172**	.037	117*	.012	.037	.146**	-,587***	1.00					
L. Tan*SOE	250**	180**	060	.041	053	.062	.096	052	090	.197***	.181**	1.00				
M. FInstDis	.122*	.035	002	103	.099	.006	.050	052	050	029	.069	048	1.00			
N. R&D*SOE	152**	095	040	.107	.109	056	.056	068	024	.484***	552***	.291***	.075	1.00		
0. BHAR	086	035	.010	.003	100	043	118*	230***	078	.105	129*	.108	,085	.066	1.00	

Note:\*P<0.1; \*\*P<0.05; \*\*\*P<0.01

Variables	Model 1	Model 2	Model 3
Constant	-1.015	-1.142	-1.119
	(-0.955)	(-1.084)	(-1.061)
Cashhld	-0.211	-0.207	-0.214
	(3.076)***	(-2.985)***	(-3.103)***
AcqSize	0.257	0.278	0.280
	(3.556)***	(3.808)***	(3.836)***
FInstDist	0.191	0.196	0.200
	(2.600)***	2.634)***	(2.696)***
StateOwn	0.138	-	-
	(1.976)**		
PrivateOwn		-	
		0.121	
langibles x SOE	-	-0.151	
		(-1./34)*	0 1 4 7
KAD X SUE	-		U.14/ 2.124**
Control Variables			2.124**
Payment	0.028	0.033	0.032
	(0.395)	(0.447)	(0.428)
Relatedness	0.025	0.014	0.015
	(0,335)	(0.188)	(0.196)
Growth	-0.094	-0.092	-0.094
	(-0.613)	(-0.599)	(-0.607)
DealSize	-0.057	-0.052	-0.050
	(-0.732)	(-0.641)	(-0.624)
Experience	-0.066	-0.064	-0.065
	(-0.852)	(-0.831)	(-0.849)
Sector 2	-0.060	-0.078	-0.081
	(-0.736)	(0.932)	(-0.993)
Sector 1	0.065	0.066	-0.065
	(0.827)	(0.817)	(0.807)
R <sup>2</sup>	0 151	0 176	0 170
Adjusted R <sup>2</sup>	0.133	0.144	0.143
F-value	8 744***	5 545***	6 240***
DW	2.016	2.022	2.022

 Table 8: Multiple Regression Results:

Notes: \*P<0.1; \*\*P<0.05; \*\*\*P<0.01