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INSTITIÚID TEICNEOLAÍOCHTA PHORT LÁIRGE

***An Analysis of Chinese Domestic and Cross-Border  
Mergers and Acquisitions: An Acquiring Firm  
Perspective***

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**MBS Economics and Finance**

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## **ABSTRACT**

This study investigates the short-term wealth effects on Chinese acquiring firm shareholders following the announcement of Chinese domestic acquisitions and cross-border acquisitions during the period 2003 to 2012. The final sample size consists of 204 deals including 173 domestic deals and 31 cross-border deals. An event study based on the market model is utilized to calculate the cumulative abnormal return. The finding shows that acquirers realize significant positive returns over the 3-day and 5-day event windows overall. In terms of domestic and cross-border deals, domestic deals are more profitable than cross-border deals and the difference in returns is statistically significant. Then the multivariate analysis is used to investigate the significant determinants of announcement returns. The result shows that the key drivers of returns are target location, payment method and relative firm size. Overseas targets have significantly negative influence on acquirers' announcement returns. Cash is found to be the dominant payment method but it also has significant negative influence on acquirers' announcement returns. Finally, a significant positive relationship is found between relatively large deals and announcement returns.

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Again, thank you all of you!

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## ETHICAL DECLARATION

I declare that this dissertation is my own work except where I have made explicit reference to the work of others. I have read the chapter ‘Doing a Dissertation at WIT’ in the text Professional and Academic Skills, and hereby declare that this dissertation is in line with these requirements. I have discussed, agreed and complied with whatever confidentiality or anonymity terms of reference were deemed appropriate by those participating in the research and dealt appropriately with any other ethical matters arising.

I have uploaded the entire dissertation as one file to Turnitin® in Moodle®, examined my ‘Originality Report’ by viewing the detail behind the overall ‘Similarity Index’ in the ‘Match Overview’ listing, and have addressed any matches that exceed 3% in this listing. I have made every effort to minimize my overall ‘Similarity Index’ score and the number of matches occurring.

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Nanyu Du

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Date

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# Introduction

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## 1. INTRODUCTION

This chapter provides a foundation to the dissertation by briefly introducing the background of the study and illustrating the rationale. Finally the structure of dissertation is outlined.

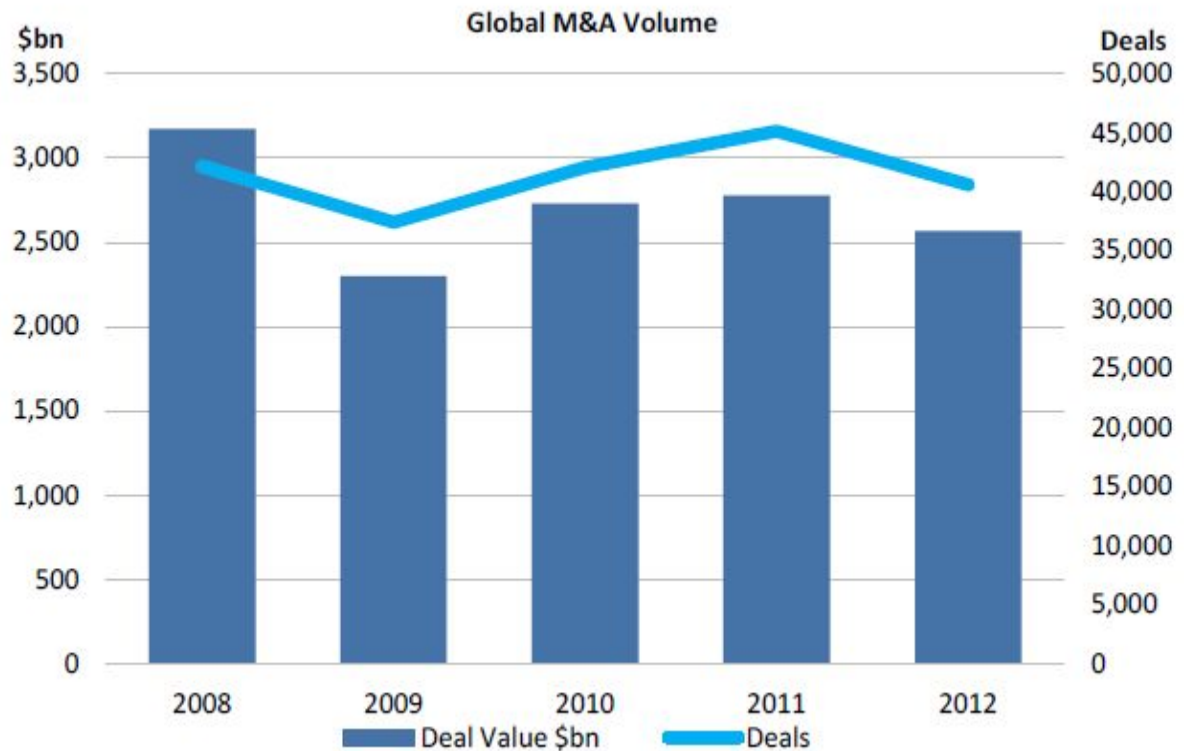
### 1.1 Background of this study

Mergers and acquisitions (M&As) has been considered as one of core areas in corporate finance. It is an efficient way to allocate resources in an economy. There are a variety of expressions of mergers and acquisitions. For example, Coyle (2000) defines mergers and acquisitions as a process where separate firms combine all or part of their operations. Although it is often regarded interchangeable between the mergers and acquisitions, differences still exist between these two concepts. A merger occurs when two or more companies join their assets to create a new unified entity while an acquisition or a takeover occurs when the control of assets transform from one organization to the other (Coyle, 2000; Buckley and Ghauri, 2002).

M&As are crucial investment decisions for a company as they have a great influence on financial and operational structure and competitiveness of a company. M&A activities are increasing with the changes in business environment and the growth of the economy. Francis, Hasan and Sun (2008) point out that many firms get opportunities to invest domestically and internationally due to the development of international business environment. Particularly, cross-border M&A have been regarded as a popular way to enter into foreign markets and are quickly becoming a dominant part of foreign direct investment (Aybar and Ficici, 2009).

According to statistics from Dealogic (2013), the total volume of worldwide M&A was \$2.57 trillion during full year 2012 decreasing by 8% compared to volume of \$2.78 in the full year 2011 levels. This can be seen in Figure 1.1.1 overleaf. The volume of M&As in emerging markets (\$723.0 billion) account for 28% of total volume increasing by 9% during full year 2012 (Thomson Return M&A review, 2012).

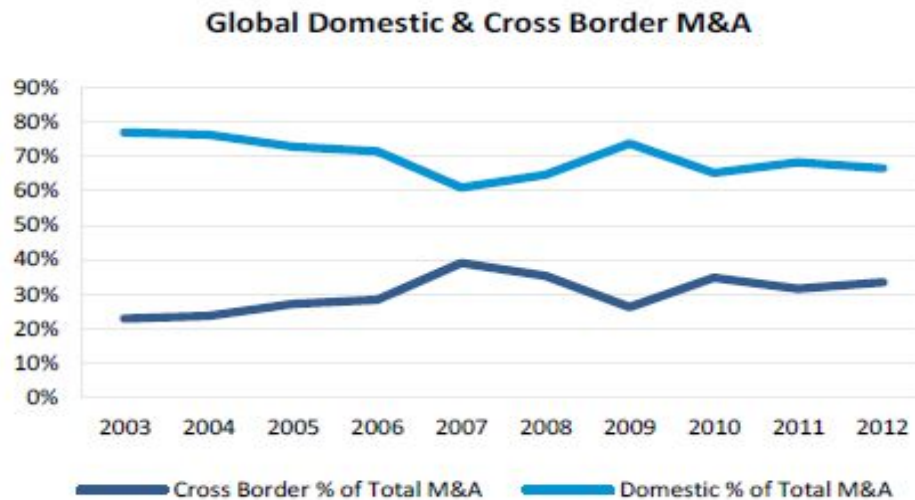
**Figure 1.1.1: Global M&A Volume per year**



**Source:** *Dealogic: Global M&A review (2013)*

As for the worldwide cross-border M&A volume in 2012, it increased by 6% over the same period in 2011 reaching \$0.94 trillion. There is a clear trend can be seen from the Figure 1.1.2 overleaf that global domestic M&A volume shows the opposite trend to cross-border M&A volume. Global domestic M&A volume in 2012 set the lowest record at \$1.71 trillion since 2009.

**Figure 1.1.2:** Global Domestic and cross-border M&A Volume by per year



**Source:** Dealogic: *Global M&A review (2013)*

Existing research on M&A have evolved extensively over last few decades and a number of M&A theories on culture, management, internationalism and business disciplines have been made and empirically tested. However, this study conducted by finance perspective focus on stock price action upon M&A announcements. This paper is unique as the objective of this study is to investigate short-term stock reaction upon Chinese domestic and international M&A announcements as well as providing the latest evidence about the wealth effects of both domestic and cross-border M&A for shareholders in Chinese acquiring companies over the ten year period from 2003 to 2012.

## 1.2 Rationale of this study

The rationale for why this research focuses on Chinese mergers and acquisitions (M&As) is as follows:

Firstly, the Chinese economy is unique. China has witnessed a significant development during the last ten years as Chinese capital markets have gradually transformed into one which is consistent with international standards. The financial crisis brought the diminishing effects to many countries and China was also influenced negatively, but the performance in 2008 was still better than some economies. According to National Statistics cited by Bhabra and Huang (2013), global M&A volume decreased around 30% and only totaled \$2.89 trillion in 2008.

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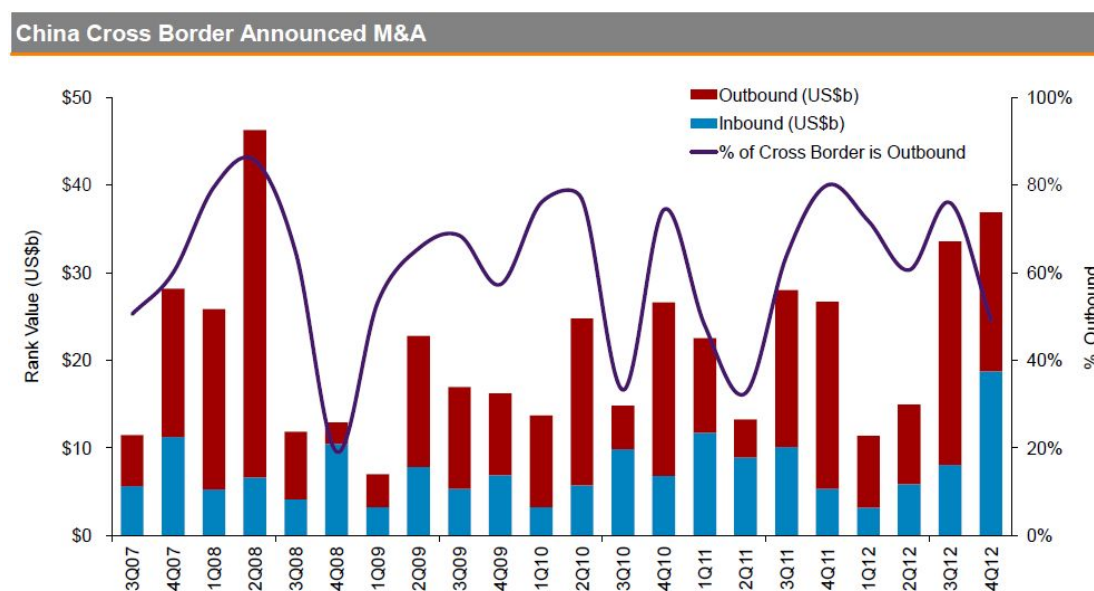
According to CHINA.ORG.CN (2009), China's GDP grew 9% in 2008 recording the slowest pace since 2003, but during this time, there were an increasing number of Chinese companies who were expanding in scale and strengthening their own power by engaging mergers and acquisitions in both the home market and the foreign market over this period. Overall, China has been still regarded as an important M&A market and its firms have the potential to have a big impact on international markets.

Secondly, ownership structure of Chinese companies is different from other countries' companies. State-Owned-Enterprises (SOEs) occupy key parts in most listed companies with the government continuing to hold the majority shares in the enterprise either directly or in combination with legal person entities. Hence it is not surprising that many acquirers are SOEs targeting private firms or subsidiaries, moreover, many cross-border M&As conducted by SOEs (Bhabra and Huang, 2013). This structure also implies that government politics are likely to exert huge impact on M&A decisions. Many political reforms have greatly reshaped the Chinese economy and boosted Chinese M&A activities. "Go Global" policy that was implemented 1991 has significantly promoted foreign investment, cooperating activities with foreign organization as well as brought a steady growing trend to overseas M&A activities (Black, et al, 2013). China's 12th Five-year plan launched in 2011 provides a series of support and favorable policy environment for overseas investment, M&A transactions and reorganization (Skadden, 2013). Many companies have been encouraged to acquire other companies to decrease the burden of the government, increase the total productivity and better allocate the resources. They also are expected to develop successfully in an international business environment to respond to government's development strategy (Deng, 2009).

Thirdly, unlike other high-growth economies, Chinese outward foreign direct investment (FDI) has two unique features. First, instead of simply establishing wholly owned subsidiaries abroad, Chinese outward FDI is via M&A more frequently. 43.2% of China's outward FDI in 2010 took the form of M&A, with an annual growth of 54.7%. Second, Chinese outward FDI is mainly run by state-owned enterprises (MOFCOM, 2011, cited by Dong and Guo, 2013). It can be seen in Figure 1.2 overleaf that there is a fluctuation in China cross-border activities. Although compared to the fourth quarter of 2011, China outbound activity declined by 15.2% recording at \$18.1 billion in 2012, the total value of China cross-border activity for

whole 2012 was \$96.7 billion with 6.3% higher than that in 2011 (Thomson Reuters M&A review, 2012).

**Figure 1.2:** Volume of Chinese cross-border activity per year



**Source:** Thomson Reuters M&A review (2012)

However, to some extent, Chinese overseas acquisitions become political sensitive and raised concerns among some countries. These countries (i.e. U.S, Australia, Canada) have started to regard Chinese cross-border M&A as a threat in some areas such as energy, nature resource and technology sectors. Reducing resources and increasing global demand are amplifying this impact. President Obama has openly criticized China's trade practices (Black, et al, 2013). Particularly for some state-direct M&As, some economies like Australia and Canada once open market for acquisition are concerned that resources would be allocated by officials rather than markets. Therefore, they put barriers to state-own companies. Furthermore, cheap Chinese capital is also a threat to rivals (The Economist, 2010).

Last but not least, Chinese acquisitions are becoming more sophisticated in their M&A strategy. They begin to consider the post-merger integration process before a deal is completed because they are realizing that in some occasions, acquiring a firm may be more time consuming and costly than the actual transaction itself. As Chinese entities become more focused on clear corporate discipline and expansion plan, there is more targets acquired by Chinese acquirers operate under the standard discipline (Financier Worldwide, 2012).

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Thus, it is clear evidence that China is a unique M&A market in terms of economic performance and ownership structure. Given the paucity of evidence on Chinese mergers and acquisitions and the importance of M&As with the Chinese economic development, it is timely to investigate Chinese mergers and acquisitions. This paper focuses on the wealth effects of Chinese mergers and acquisitions for acquiring firm shareholders as these companies expand both in the home market and overseas. The study empirically tested 31 completed cross-border M&A deals and 173 completed domestic M&A deals that occurred during 2003 to 2012. The ten year frame is chosen because it involves a more recent era over which the Chinese economy special economy period where Chinese economy experienced a global financial crisis and it provides an insight into the frequency and consistency of M&A deals carried out by Chinese acquiring firms.

This study is a contribution to Chinese M&A literatures by developing a new insight on mergers and acquisitions for Chinese companies and adding empirical evidence of announcement returns following the Chinese M&A announcements. However, there are a number of limitations in this study. Firstly, This study only focuses on one country and is confined to an acquiring firm perspective. Secondly, this study is limited to the short term wealth effects and only focuses on expected returns, not actual returns. Finally, dollar is the only currency unit in this study and currency exchange reate is not considered due to the floating exchange rate in different time frame.

The paper is structured as follows:

**Chapter 2** reviews the relevant literature related to acquiring shareholders returns.

**Chapter 3** extents details of the research objectives and describes the dataset and the methodology employed to address these objectives.

**Chapter 4** presents the empirical findings of the research.

**Chapter 5** discusses the results obtained from the research in Chapter 4.

**Chapter 6** concludes the study and outlines the limitations of study.



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# Literature Review

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## 2. LITERATURE REVIEW

### 2.1 Introduction

This chapter commences with the theory underpinning mergers and acquisitions followed by rationale of international mergers and acquisitions particularly focusing on Chinese cross-border M&A actives. Then factors that impact returns of acquirers are described. Finally, empirical evidence of the wealth effect of M&A in foreign markets and the Chinese home country are demonstrated.

### 2.2 Theory for Mergers and Acquisitions

There is a lot of research on the motive for companies engaging in acquisitions; usually these theories can be divided into three categories: Synergy Theory, Hubris Theory, and Agency Theory.

<b>Table2.2: M&amp;A motives and gains</b>			
Theory	Total gains	Gains to target	Gains to acquire
Efficiency or Synergy	+	+	+
Hubris Theory	0	+	-
Agency Theory	-	+	-

**Source:** Berkovitch and Narayanan (1993)

#### 2.2.1 The Synergy Theory

In a synergistic takeover, wealth is created when the resources of two parties are combined in a way that the total values are more than the sum of individual inputs (Hodgkinson and Partington, 2008). Thus, synergy can be seen as a win-win solution as shareholders in both parties gain from this event. Synergy can be classified into three major categories as follows: operational, financial and managerial. Operating synergy is the most popular choice for M&A. It results in the realization of production or administrative efficiencies (Chatterjee, 1986). Moreover, this theory emphasizes on economies of scale and mergers and acquisitions help achieve high levels of activities at which they can be obtained (Zhang, 2011). Financial synergy theory hypothesizes that complementariness between merging firms, lies not in management capabilities, but in matching the availability of investment opportunities and cash flow management. It results in the lower cost of internal financing versus external

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financing. Managerial synergy occurs when the unique managerial expertise of two companies is jointed in generating benefits (Ray, 2010). More recently, Dutordoir, Roosenbooml, Vasconcelos (2014) argues that synergy can create favorable stock market performance of M&A deals, meanwhile, as negative announcement gains are usually generated by equity financed transactions, managers in acquiring companies are likely to release synergy forecast. They also find that if M&As occur in the same industries or with low level of asymmetry of information on target value, synergy is more likely to be released.

### **2.2.2 The Hubris Motivate**

The Hubris motive for M&A relates to management's excessive self-confidence (pride, arrogance) and associated with negative abnormal return (Aktas, Bodt and Roll, 2009). In Roll's study (1968), he points out that hubris occurs when managers of acquiring firm are overly optimistic and think that they can find hidden synergies and select valuable targets. As a result, they usually overestimate the value of a target and tend to overpay for the deal. The returns will be negative. Hubris represents the wealth transfer from shareholders of acquiring firms to those of target firms. Berkovitch and Narayanan (1993) state that hubris is motivated by managers' mistakes in estimating value of target. They found, that there is no change in the combined wealth of the firm, and gains will be only enjoyed by the target shareholders rather than the acquirers. Rosen (2006) argues that it is possible for managers in acquiring firms become optimistic during prosperous period. In this case, non-overconfident managers who are able to refrain from overestimating target value often create more positive shareholders' wealth deals than ones conducted by overconfident managers in bullish period. This is reiterated by Croci, Petmezas, and Vagenas-Nanos (2010). They tested 3223 UK mergers and acquisitions from 1990-2005 and yielded findings that non-overconfident value add deals in all valuation time. More specifically, acquirers obtain the most without overconfident managers and firms with non-overconfident managers experience better market receptions in all kinds of market environments.

### **2.2.3 The Agency Theory**

The agency theory suggests that M&A are motivated by the managers' interest and aim to strengthen managers' own utility by acquiring management (Shleifer and

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Vishny, 1991). Thus, a conflict arises when the interest of the management team and interest of shareholders are not the same. Managers pursue more power and security, such as reputation, status, control, compensation rather than profit which belongs to shareholders (Hopkins, 1999). Firth (1991) who concludes that the management of acquiring firms benefit from acquisitions regardless of whether their shareholders gain or lose from the deal. These actions results in agency costs that finally reduce the total wealth of M&A, as shareholder interests in this event are not the core focus of management. According to the free cash flow theory developed by Jensen (1986), if a company has enough cash flow then the acquiring managers have incentive to speed up the expansion rather than paying shareholders even if the deal is non-profitable. Under this situation, self-interested managers will tend to waste a company's money to benefit themselves (Martynova and Renneboog, 2008).

### **2.3 Rationale of international mergers and acquisitions**

There are many options for firms to obtain strategic assets, among which foreign direct investment (FDI), to some extent, is the most popular and effective method (Ricken, 2011). Especially, when firms search for assets embodied in other firms, or they want to reorganize and build strategic assets, they are more likely to engage in M&A to enter market (UNCTAD, 2006, cited by Deng, 2009). According to BCG (2006), diverse sections, like technology, industrial goods, chemistry, telecommunications, pharmaceuticals, are becoming the favorable expansion grounds for top 100 firms from developing markets. Meanwhile, these expansions consist of different methods of FDI such as cross-border M&As and exports. Among overseas acquisitions, more than half of deals target in developed countries. Cross-border M&As is an important strategic corporate initiative, which facilitate firms to exploit certain areas such as tax regulation, infrastructure investment, high quality human capital (Kogut, 1988). The cross-border acquisition has been regarded as a key role in corporate governance system (Seth, Song and Pettit, 2002) and has become a major way to expand market shares (Aulakh, 2007). Thus, cross-border M&As creates more possibilities for firms to operate flexibility, leverage current capabilities and extend business scales (Bhatag and Zhu, 2011). Nagano and Yuan (2013) believe that cross-border acquisitions can create higher returns than domestic deals if these transactions occur in rapidly growing developing countries where governments promote state-

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owned share releases. They point that this is particularly true for acquirers in industrialized countries as they gradually improve restructuring and restore the profitability of targeted firms so that the corporate value is increased based on the consolidated business.

### **2.3.1 Drivers behind Chinese cross-border M&A**

It seems that motivations for Chinese cross-border mergers and acquisitions are mixed. Many Chinese multinational corporations aim to keep up with international giants so they urgent to seek strategic assets FDI (Deng, 2007). On the other hand, Chinese companies implement outbound FDI to minimize disadvantages as Chinese firms usually lack innovation so they rarely create new products and process. This competition pattern that to get benefits from high volume by imitating products and providing low price cannot generate sustainable profits (Deng, 2009). This points is reiterated by Yang and Hyland (2012). They argue that for Chinese international M&A activities, imitations are more likely to happen when the number of completed deals initiated by other Chinese firms increases and when it is clear to tell which is the most popular choice regarding the content of this strategy.

After the financial crisis, there is thriving trend that financial investors have implemented more transactions in outbound markets. Transactions involving Chinese buyers trading volume increased 16% compared with 2011 and total value was \$3.7 billion. Meanwhile, the majority investors are motivated by strategic acquisitions (Squire Sanders, 2013). By acquiring strategic assets via cross-border M&As, Chinese buyers foster the strength of unique ownership structures and circumvent weakness in completion markets (Rui and Yip, 2008). Later, Deng (2009) also supports this view. He believes that strategic assets M&A can bring acquiring firms good reputation and social support.

More recently, Gubbi et al (2010) point that for acquirers in emerging markets, the motivation behind the cross-border acquisitions is to acquire valuable intangible and tangible assets. Chinese companies undertake overseas M&A to obtain human capital with advanced skills, technology and intellectual property to strengthening the capacity of local industries, increase global competition, improve the level of product portfolio as well as expand sales channels (Squire Sanders, 2013). Resource seeking dominates the key motivation of cross-border acquisitions, because resource acquiring helps to ensure raw material supply chain in China, as a result, industrial production

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and infrastructure development can be better maintained. In terms of geography, developed markets (i.e. North American and European) are the popular target destinations to acquire advance technology and reputable brands accelerating economic development (Li, 2012).

Zhang and He (2014) maintain that as long as a cross-border M&A is based on national development plan, economic nationalism will reward this deal. One thing is noted that Nicholson and Salaber (2013) point out this overseas expansion is greater for buyers from some other developing countries (i.e. Indian) than Chinese acquirers due to language, business culture and politics. Thus, in order to conduct cross-border M&As successfully, it is critical to understand local nationalist attitudes and policies as well as foreign regulations, culture and relationship with China (Zhang and He, 2014).

## **2.4 Determinants of acquiring shareholder returns**

There are various factors which influence the wealth effects of acquirers in mergers and acquisitions activities upon announcements very differently. Some key factors are outlined as follows and contribute to this study.

### **2.4.1 Industry Relatedness**

If bidder and target share a same Standard Industry Classification (SID) code, it is an acquisition of related industry. In a relatedness M&A, the acquirers are more likely to obtain positive mean abnormal return (Akbulut and Matsusaka, 2010). Walker (2000) points that related acquisitions refer to strategic alignment, which implies synergy or stronger market power. This is supported by Homberg, Rost and Osterloh (2009) and Nicholson and Salabar (2013). They claim that potential synergies largely relate to the relatedness between the targets and acquirers, particularly in cross-border M&As. When an acquirer and a target are in the same industry, such a deal could facilitate the acquirer to achieve higher market share through generating greater economic scale and reduce the average cost and managerial slack (Singh and Montgomery, 1987; Bertrand and Zitouna, 2008). With fewer competitors in the industry, the relatedness deals can increase the control of acquirer on the market. Fierce competition in the market also pushes the companies to find out ways to keep the position in the market. In addition, Conn et al. (2005) report that foreign acquisitions of high-technology firms can extract merger profits due to the inherent synergy of effectively acquiring

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knowledge driving firm innovation. Similar findings are also found by Kohli and Mann (2012). They highlight that if acquirers and targets are both in technology intensive sector, this kind of international transactions will generate significant wealth returns because it allows acquirers utilize the combined intangible resource at a broader scale in a new market and create more wealth.

#### **2.4.2 State-Owned Structure of an acquiring firm**

Ownership structure is a significant determinant for Chinese companies's economic performance. The majority of Chinese public companies are dominated by state owned shares, particularly in key industrial and financial resources sectors (The Economist, 2010). These companies also called State-owned enterprises (SOE). On the other hand, there are increasing number of non-SOE have been listed in China and many of them have been active in the M&A market. Therefore, examining this factor can extend the literature on how acquirers' announcement returns are affected by ownership structure. Public companies with dominative state-ownership are perhaps more powerful in finance, management and could launch a more profitable deal for themselves (Chi, Sun and Young, 2011). The SOE firms also have stricter government supervision, which may reduce the possibility of irrational deals. In terms of cross-border M&As, these state-owned enterprises usually are large and have adequate experience of overseas operations. In addition, one of main purposes of the Chinese government policies is to support competent enterprises to go global. Thus, state-owned enterprises are more likely to gain support from the government when they expand abroad (Nicholson and Salaber, 2013). Wu and Xie (2007) examined 165 Chinese cross-border acquisitions during 2000-2006 and draw a conclusion that state-owned construction has a positive influence on acquirers' performance in overseas acquisition events.

However, there are some conflicting opinions. Chen and Young (2010) point that acquirers lose wealth when they are in the government ownership structure. Zhang and Ebberts (2010) state that subsidization offered by the home government is regarded as an unfair business and the host country's government is likely to refuse acquisition by SOE acquirers to protect local industry development and national security. As a result, M&A deals are likely uncompleted due to SOE structure. More recently, Dong and Guo (2013) suggest that most State-Owned Enterprises engaged in overseas M&As always experience political or social resistance, particularly from

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advanced economies and they were commonly suffered disfavored performance during the post-M&A period. Furthermore, empirical evidence of Bhabra and Huang (2013) shows that the returns of SOE just slightly higher than returns of non-SOE and wealth effects do not show significant difference between SOEs and non-SOEs.

#### **2.4.3 Status of target**

Positive wealth effects are realized when acquirers target private firms while negative wealth occurs when acquirers target public firms (Fuller, Netter and Stegemoller, 2002). It is supported by Conn, Cosh, Guest, and Hughes (2005) who argue that hubris is less likely to happen in private bids. Meanwhile, they tested 4344 acquisitions initiated by UK companies and the results indicates that bids for private targets lead to more positive wealth effects for bidders than acquisition of public ones. Martynova and Renneboog (2006) point that acquirers are likely to be benefit from price discounts as compensation for buying a comparably illiquid stake when targets are private. Meanwhile, acquirers may get advantages in negotiations because private companies usually have fewer shareholders. Empirical results from Faccio et al (2006) and Aybar and Ficici (2009) confirm these theories indicating that acquisition of privately owned firms brought significant returns for acquirers around the M&As announcement period. More recently, Mehta and Schiereck (2012) examine wealth effects of 69 takeovers from 1998 to 2010 and these deals took place in the brewing industry across worldwide. They find acquisition of public targets yields mixed Cumulative Abnormal Returns (CARs) between -1.01% to 1.131%, on contrary, acquisitions of private targets create significant CARs (between 1.58% and 2.49%).

#### **2.4.4 Location of targets (domestic market versus foreign market)**

Academic study on Chinese cross-border M&As are not new, but only few studies examine the impact of domestic targets and overseas targets on acquirers' wealth effects. Therefore, this study examines this factor to add new evidence in Chinese M&A literatures. As it stated in section 2.3.1, Chinese firms engaged in cross-border M&As can expand operations abroad and gain advance tangible and intangible resources. Morck and Yeung (1992) point that cross-border M&As will create value for acquirers due to internalization theory. It is supported by Eun, Kolodny and Scheraga (1996) who tested 225 foreign acquisitions of U.S companies during 1979 to 1990 and found foreign acquirers gain significant positive returns. It suggests that



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cross-border M&As are synergy-creating. However, in terms of Chinese acquirers, Nicholson and Salaber (2013) point out that cultural distance would be a barrier for Chinese cross-border M&As, especially when targets are located in western countries, while domestic M&As can avoid this problem. Black, Doukas, Xing and Guo (2013) test the impact target location on Chinese acquirers during the period from 2000 to 2009. The result shows that cross-border M&As have a negative impact on acquirers' wealth effects. Similarly, Bhabra and Huang (2013) find a negative impact of cross-border M&As during 1997 to 2007.

#### **2.4.5 Method of Payment**

Means of payment are considered to offer strong signaling power of shareholder return. Acquirers use stock payment when they believe that their stocks are overvalued. On the other hand, acquirers will choose cash-payment if they think their stocks are undervalued and the transaction may lead to a positive stock reaction as share value of acquiring firm is expected to increase (Myers and Majluf, 1984; Tuch and O'Sullivan, 2007). Generally, stock payment exerts negative impacts on announcement returns while cash offers create positive returns. Ismail and Krause (2010) tested 337 U.S. M&A deals from 1985 to 2004 and found that more issued shares lead to a continued decrease in announcement gains.

In terms of payment method in Chinese M&As, cash payment is widely used. This view is supported by Chi et al (2011) and Bhabra and Huang (2013). Chi et al (2011) choose 1148 Chinese M&A and surprisingly found that M&As of cash payment account for high percentage in total example (87.28%). Bhabra and Huang (2013) examine 136 M&As completed by Chinese companies and the results suggest that cash purchases generated positive Cumulative Abnormal Returns (CARs) for shareholders in acquiring firms with 2.25% for the three day window and 2.37% for the five day window while stock purchases brought negative CARs. However, Martin (1996) argues that stock purchase is more commonly applied by acquiring companies that have great developing opportunities, thus, they can maintain cash reserves to support their future growth investments; on the another circumstance, due to the lack of access of cash, bidders have no choice only can use equity payment. This view is supported by Sehgal, Banerjee and Deisting (2012) who examine the impact of M&A announcements on stock returns based in the BRICK markets (Brazil, Russia, India and China). They point out that acquirers in the BRICK markets may prefer use stock

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payment in order to preserve cash for good future investment opportunities and to avoid overpayment. Moreover, acquiring firms may share risk with targets with stock payment due to an incompletely efficient stock market.

#### **2.4.6 Relative firm Size**

Relative firm size is a widely used as a control variable when analyzing shareholder returns in M&A. Asquith, Bruner and Mullins (1983) point out that the large size of the target relative to the acquirer positively influences the return of the bidder. Likewise, Moeller, Schlingemann and Stulz (2004) find evidence that return was in reverse relationship with the acquirer size. They did research on 12,023 merger and acquisition events between year 1980 and 2001 and found that small acquiring firms realized 2.24 % returns greater than larger acquiring firms. Demsetz and Lehn (1985) maintain that shareholder interests are better connected with management incentive systems, probably due to large stock ownership structure. Then considering the hubris theory, managers in larger firms are more likely to be over-optimism when they experienced success in such companies. This tends to lead to hubris destroying shareholders' interests by engaging in M&A transactions that are not always beneficial to the acquirers. However, Homberg, et al. (2009) claim an opposite opinion that larger acquirers is necessary for the realization of planned synergies. More recently, the opposite result is found by Humphrey-Jenner and Powell (2011). They analyzed 1900 acquisitions in Australia between 1993 and 2007 and draw a conclusion that there were significant returns for larger acquiring firms. When two firms have a relatively same size engaging in mergers and acquisitions, Filipovic (2012) points out that the bidders have better performance in this situation because it is easier for bidders to recognize and assimilate resource and skills acquired in transactions and appropriately utilize them in acquiring firms. Consequently, it appears that there is no consistent evidence on impact of relative firm size.

### **2.5 Empirical Evidence**

#### **2.5.1 Evidence from international markets**

It seems that empirical evidence on the returns of acquirers in developed markets are mixed. In the U.S. market, Dodd (1980) used the 81-day event window to analyze 151 acquirers during 1970-1977. He finds negative return of 0.23% for bidders. While some scholars (i.e. Faccio, McConnell and Stolin, 2006; Masulis, Wang and Xie,

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2007, cited by Bhabra and Huang also (2013) find positive announcement return for bidders around announcement date. In other developed markets, Wong and Cheung (2009) tested 166 Japanese M&As from 2000 to 2007 and found 0.25% positive return over the 3-day window. More recently, O' Donnell (2013) examined 220 Japanese domestic deals from 2000 to 2012 finding that 0.3% negative return over the 41-day window and 0.4% positive return over the three day window. Gregory and O' Donohoe (2014) conducted a comparative study on 288 UK acquisitions consisting of 169 domestic deals and 119 foreign deals. This empirical evidence illustrates that acquirers realize negative returns of 1.07% over the 5-day window and generally returns for domestic acquirers are worse than cross-border acquirers.

For emerging markets, evidence on M&A is limited. Aybar and Ficici (2009) did research on overseas M&A activities on 13 emerging markets. This result implies that cross-border acquisitions created negative returns for acquirers. On the contrary, Ma, Pagan and Chu (2009) use 1477 M&A deals to examine abnormal returns to acquiring firm shareholders among ten Asian markets including China during 2000 to 2005. The mean Cumulative Abnormal Returns (CARs) for the 3-day and 5-day windows are 1.28% and 1.70% respectively and statistically significant at the 1% level. Rani, Yadav and Jain (2013) analyzed 623 overseas mergers and acquisitions made by Indian companies during 2003-2008. The finding implies that bidders realized positive returns from the acquisitions in the short term. Bhagat, Malhotra and Zhu (2011) used the 3-day and 5-day event windows to analyze 698 cross-border acquisitions made by eight emerging country firms from 1991 to 2008. They find that acquirers in emerging countries benefit from the stock market with significantly positive market response on announcement day. The findings also suggests better corporate governance measured in the target country has positive influence on bidders' returns.

Kohli and Mann (2012) assessed 268 Indian acquisitions comprising 202 cross-border deals and 66 domestic deals. The empirical results highlight that under the 3-day window, cross-border M&As created higher optimistic returns for acquirers than domestic M&As (2.32% versus 1.19%).

## **2.5.2 Evidence from China**

### **2.5.2.1 Evidence of Domestic M&A**

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Li and Chen (2002) investigated on 196 M&A deals during the period 1999 to 2000 and found that a M&A announcement creates positive returns of 2.12% to the acquirers over the three-day event window. Han and Wang (2007) examined 826 Chinese M&As from 2001 to 2004. However, this study yields the findings that acquirers yield a negative return (-0.033%) over (-6, +6) day window. Kam, Citron, and Muradoglu (2008) tested 303 Chinese acquisitions from 1999 to 2003 and results imply that the stock market rewards acquirers on the announcement day with a 1.3% average abnormal return. More recently, Chi et al. (2009) tested 1148 Chinese M&A activities from 1998 to 2003 and found that bidders obtained significant positive CARs (0.39%) over the 3-day window at the 1% level.

#### **2.5.2.2 Evidence of cross-border M&A**

Boateng, Qian and Tianle (2008) tested the short-term performance of 27 Chinese cross-border M&A from 2000 to 2004. The result suggests that the cross-border M&As reward Chinese acquiring firms with 1.32% positive CAR for the 2-day event window and 4.427% CAR for the 41-day window.

Later, Nagano and Yuan (2013) examined 484 cross-border deals between 1998 and 2006. They found acquirers earn significant positive CARs for the 3-day window and 41-day window. At the same time, they point this value increasing for bidders related to targets with sufficient cash reserve and bidders with high proportion of market-to-book.

During the similar period, Nicholson and Salaber (2013) tested the wealth effects of 63 Chinese cross-border deals over the period 2000 to 2010. The finding suggests cross-border deals targeting companies in developed countries create significant positive returns of 2.19% for Chinese bidder for (-3, +1). In addition, they provide evidence that acquiring firms in the manufacturing sector gain a significant premium of 3.8%.

More recently, Ning, Kuo, Strange and Wang (2014) investigate acquiring shareholders' return by examining 335 acquisitions made by Chinese multinational enterprises over 1991 to 2010. The mean CARs are statistically significant in the 2-day (0.61%) and 3-day (1.05%) window. It indicates that Chinese cross-border M&As averagely generate on average positive returns to acquiring shareholders upon announcement date.

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### **2.5.2.3 Domestic M&A vs. Cross-border M&A**

Black et al. (2013) compared Chinese domestic and foreign M&As on short-term and long-term stock performance from an acquirer perspective by examining 415 domestic deals and 43 cross-border deals from 2000 to 2009. Results indicate that bidders' wealth effects are significantly positive in short term in domestic M&As, while cross-border M&As are associated with long-term gains. Specifically, domestic deals create statistically positive returns of 2.76% for acquiring firm shareholders in the three day event window. In comparison, acquiring firm shareholders lose 0.58% in cross-border deals. However, in the long-term period, cross-border acquisitions totally realized 14.2% returns in total while domestic ones experienced losses of -7.98%. The result also implies that bidders earn significant abnormal returns in short term when purchasing within the energy, industrial, and materials sectors. However, these profits are confined to domestic transactions,

More recently, Bhabra and Huang (2013) analyzed short-term and long-term stock returns for acquirers in Chinese listed companies. The sample consists of 13 cross-border deals and 123 domestic deals from 1997 and 2007. The findings show that acquirers gain significant returns of 1.11% for the 3-day and 1.08% for the 5-day windows. The findings also suggest SOEs contribute largely to this positive return. However, they do not find significant difference in wealth effects between domestic and cross-border M&As. They state that due to the small sample size (only 13 cross-border deals), this result is less meaningful. Table 2.5.2 overleaf summaries the empirical evidence of Chinese acquiring firm shareholders' announcement returns. Appendix B presents the correlation coefficient and Variance Inflation Factor (VIF) statistics. It suggests that there is no multicollinearity among variables as VIF statistics are below 4.

The literature to date suggests that Chinese acquirers gain positive returns around announcement day. However, the empirical evidence on wealth effects on Chinese acquirers is still in infancy and mixed. Particularly, the comparison of return of Chinese domestic and cross-border return is quite limited. Hence, it is timely to investigate wealth effects of acquiring firm shareholders following the announcement of Chinese M&A and compare its difference from domestic and cross-border deals in order to provide new evidence.

**Table 2.5.2:** Empirical evidence of Chinese acquiring firm shareholder wealth effects

Authors	Sample Details	Event Windows	Findings	Region
Li and Chen (2002)	196 deals 1999 to 2000	(-1,+1)	Positive CAR of 2.12%	Domestic
Han and Wang (2007)	826 deals 2001 to 2003	(-6,-1), (0, 8) and (-6,+6)	Positive return of 0.5% for (-6,-1) Negative return of 0.69% for (0,8) and 0.33% (-6,+6)	
Kam, Citron and Muradoglu (2008)	303 deals 1999 to 2003	(-40, 0), (-40, +20)	Positive return of 9.4% and 6.9% separately 1.3% return on announcement day	
Chi, Sun and Yong (2011)	1148 deals 1998 to 2003	(-2,2), (-1,1), (-2,0), (-1,0)	Positive CARs of 0.27%, 0.39%, 0.52% and 0.49% separately	
Boateng, Qian and Tianle (2008)	27 deals 2000 to 2004	(0,+1), (-20, +20)	positive CAR of 1.32% and 4.427% separately	cross-border
Nagano and Yuan (2013)	484 deals 1998 to 2006	(-1,+1) (-20,+20)	Positive CAR of 2.47% and 7.92% separately	
Nicholson and Salaber (2013)	203 deals 2000-2010	(-3,+1)	Positive CAAR of 2.19%	
Ning, Kuo, Strange and Wang (2014)	335 deals 1991-2010	(-1,+1) (-2,+2)	Positive CAR of 1.05% and 0.61% separately	
Black, Doukas, Xing and Guo (2013)	415 domestic deals and 43 cross-border deals 2000 to 2009	(-1,+1)	Positive return of 2.76% in domestic deals Negative return of -0.58% in cross-border deals	Domestic vs. cross-border
Bhabra and Huang (2013)	13 cross-border deals and 123 domestic deals 1997-2007	(-1, +1), (-2,+2)	Positive return of 1.23% and 1.24% for domestic deals Negative return of -0.26% and -0.55% for cross-border deals	

## 2.6 Conclusion

A large number of previous researchers have provided many valuable outcomes on mergers and acquisitions area. This chapter commenced by a basic theory of mergers and activities, rationale for overseas mergers and acquisitions, factors that influence return of Chinese bidders as well as provided some empirical evidence on wealth effects of Chinese shareholders in acquiring companies. There is a clear trend that

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increasing numbers of Chinese companies grow and expand through mergers and acquisitions, especially cross-border M&As which are widely conducted by most multinational corporations. The transaction sales and level have an impressive improvement. Therefore, China, as a large and rapidly growing developing economy over recent years, has become an ideal market to investigate mergers and acquisitions and have attracted many researches' attention. Some studies were done about Chinese M&A. Despite of it, however, the empirical evidence on bidders' announcement returns and understanding of Chinese M&A are limited and mixed compared to studies on developed markets such as the U.S. and UK. The previous study rarely compared the wealth effects in domestic and cross-border M&A activities. On the other hand, there are fast changes in global business environment and rapid development of Chinese M&A. Therefore, it is imperative to fill this research gap and provide empirical evidence on wealth effects of Chinese mergers and acquisitions in both home market and overseas market from an acquiring perspective.

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# **Data & Methodology**

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## 3. DATA AND METHODOLOGY

### 3.1 Introduction

This chapter begins with the details of the research objectives followed by details of research design which explain the sample selection, event study methodology and the measurement process. Finally, the limitations of methodology and the conclusion are presented.

### 3.2 Research objectives

This research focuses on two objectives, firstly to investigate the wealth effects for Chinese acquiring firm shareholders engaged in both domestic and overseas mergers and acquisitions. Secondly, the key determinants of acquiring firm shareholders' wealth are investigated. To complete these objectives, four specific research questions are developed:

Q1: What are the wealth effects for Chinese acquiring firm shareholders following the announcement of a merger or acquisition?
Q2: Are there differences in returns from domestic announcements versus cross-border announcements for Chinese acquiring firm shareholders?
Q3: What are the wealth effects for Chinese acquiring firm shareholders across various sub-samples in terms of transaction characteristics?
Q4: How do the transaction and firm characteristics, such as industry relatedness, ownership structure of the acquiring companies, target status and target location, payment method and firm size influence Chinese acquiring firm shareholder returns?

### 3.3 Research Design

#### 3.3.1 Data

This research investigates the wealth effects for Chinese shareholders whose companies undertake both domestic and cross-border acquisitions. In this study, acquiring firms are listed in Shanghai Stock Exchange, Shenzhen Stock Exchange, HongKong Stock Exchange and Taiwan Stock Exchange. The sample is collected from *Thomson One* Merger & Acquisition database and initially consists of 308

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completed deals (252 domestic and 56 overseas deals) whose announcements were made between 1 January 2003 and 31 December 2012. This time frame captures the latest ten years after China joined the World Trade Organization (WTO) in 2001 and also global financial crisis period. During the period, M&A deals have three characteristics. Firstly, deal scale and speed have increased; secondly, target regions have become more international. Thirdly, both high-technology sector and the resource sector have become popular acquisition targets (Chen and Young, 2010). The key criteria applied in sample include only acquiring firms that are publicly listed in domestic market (i.e. Mainland China, Hong Kong, Macau and Taiwan) and who own more than 50% of the shares of the target firm after the transaction. This guarantees that the acquiring firm is the main shareholder after the transaction, which is the normal criteria in M&A studies. Target firms can be public or private companies so as to ensure that a comprehensive set of sellers are captured. Furthermore, according to study of Zhang and Ebbers (2010), during 1982 to 2009, Chinese firms conducted acquisitions across six regions: Asia, Europe, North America, South America, Africa and Oceania. Given this guidance, in this study the target nation regions refer to Mainland China, HongKong, Macau, Taiwan, Americas, Europe, Australia, Japan, and Southeast Asia, which include both developing and developed markets. However, after classifying the data, it turns out that there are no targets located in Macau; hence, this criteria is eliminated. In terms of deal value, a minimum deal value of \$50 million is utilized so as to generate significant announcement effect. A similar criterion is used by Walker (2000) who investigates the strategic objectives and stock price performance of acquiring firms in the U.S. market. By following these criteria, the sample about M&As achieved Chinese acquiring firms was selected.

Table 3.3.1 overleaf illustrates a breakdown of the sample of Chinese acquisitions announced (by year) during the period from 2003 to 2012.

<b>Table 3.3.1: Number of acquisitions per year</b>				
year	Number of M&A deals			% of total deals
	Domestic	Overseas	Domestic + Overseas	
2003	9	1	10	4
2004	5	0	5	2
2005	20	2	22	7
2006	26	6	32	10
2007	31	13	44	14
2008	30	5	35	11
2009	34	9	43	14
2010	34	8	42	14
2011	24	7	31	10
2012	39	5	44	14
Total	252	56	308	100

It can be clearly seen from the Table 3.3.1 that there has been a substantial growth both in domestic Chinese M&A market and overseas market as well. Particularly, the large number of completed cross-border deals achieved by Chinese acquiring firms was recorded in 2007. This significant increase over earlier years is more likely to be attributed to the support of the Chinese government, especially in the overseas market. For example, in 2004 the National Development and Reform Commission (NDRC) and the Export-Import Bank of China jointly began to provide low-cost loans to acquiring firms to help them conduct cross-border M&As (Zhang and Ebberts, 2010). However, the decline in the number of completed cross-border transactions after 2007 is likely to attribute the negative impact of the global financial crisis.

### 3.3.2 Event Studies

This research uses an event study to capture the wealth effects of M&A. Event studies were initially developed by Brown and Warner (1985) to evaluate U.S. acquiring firm shareholders' returns. It is a relatively standard methodology in the finance literatures that is adapted to calculate abnormal returns so as to examine the change of stock prices related to a M&A announcement. Moreover, investigating stock returns to acquiring firms can distinguish between post markup pricing and hubris motive.

To conduct an event study, the primary task is to define an event of interest and event window over which stock price involved in this event will be tested. Customarily, event window is longer than the specific period of interest (MacKinlay, 1997). However, there is no consensus on the best choice of event window for testing acquirer returns. McWilliams and Siegel (1997) point that a long event window may

include confounding effects, hence they suggest that event window should not extend beyond 2 days. By contrast, Dilshad (2013) points that too short of an event window may result in one possibility that the effect of the announcement cannot be fully captured when information is available after market closed or information is released before the announcement. The event windows utilized in previous empirical research on Chinese M&A varies. There are tabulated below in Table 2.5.2. Despite the variety of event windows, shorter windows are frequently used to investigate Chinese acquiring firm returns. For the purpose of this study two event windows, namely (-1, 1) and (-2, 2) are used which allows for direct comparison with Ning et al (2014), Bhabra and Huang (2013), Chi et al. (2009), and Nagano and Yuan (2008). It is reiterated in Table 3.3.2.

<b>Table 3.3.2:</b> Event windows used in prior empirical studies of Chinese M&A			
Event Windows	Used by	Sample time frame	Region
(-1,1)	Chi, Sun and Young (2011)	1998-2003	Domestic M&A
	Bhabra and Huang (2013)	1997-2007	
	Nagano and Yuan (2013)	1998-2006	Cross-border M&A
	Ning, Jing, Wang and Strange (2014)	1991-2010	
(-2,+2)	Chi, Sun and Young (2011)	1998-2003	Domestic M&A
	Bhabra and Huang (2013)	1997-2007	
	Ning, Jing, Wang and Strange (2014)	1991-2010	Cross-border M&A

### 3.4 Methodology Employed

#### 3.4.1 Cumulative Abnormal Returns

Abnormal returns directly measure shareholders' gains or losses in post-acquisition period (Perepeczo, 2007). In this paper, Cumulative abnormal returns (CARs) of

acquiring firms are calculated over the 3-day and 5-day event windows, which is the key to addressing research question one.

There are three models to calculate acquirers' abnormal returns, namely the Capital Asset Pricing Model (CAPM), the adjusted market model, and the market model. Among them, the adjusted market model is a relatively simple method as it assumes that the parameter alpha is zero and beta is one. The CAPM model requires the risk free return to calculate normal return. However, the benchmark of risk free interest in China is not developed as it in the U.S. and European markets. Thus the usage of CAPM model would be complicated. By contrast, the market model is relatively precise and can address the limitation of the CAMP model because it takes into account the influence of firm specific risk and market specific risk. The market model assumes that a stable linear relationship exists between the actual stock return and the normal return. The slope and intercept in market model can be estimated by running regressions in Excel. It is commonly used in previous research on Chinese mergers and acquisitions. Therefore, the market model is employed in this study, which is in line with the Chi et al (2011) and Bhabra and Huang (2013). There are four price indexes adopted to calculate market returns:

Table 3.4.1 Stock Market Index	
Stock Exchange	Stock market Index
Shanghai Stock Exchange	Shanghai (securities) composite index
Shenzhen Stock Exchange	Shenzhen Component Index
HongKong Stock Exchange	Hang Seng Index
Taiwan Stock Exchange	Taiwan Weighted Index

The calculation of abnormal return following the three steps (Chen and Young, 2010). Step 1: to obtain the market model parameter, alpha and beta, estimation window is needed to be developed when running regression. For the purpose of this study, 235-day estimation window (i.e. from day 256 to day 21 prior announcement day) is used. It is consistent with Nagano and Yuan (2013). The regression mode is:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Where:

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$R_{it}$  : Daily return for stock i on day t

$R_{mt}$  : Daily return for market portfolio m on day t

$\mathcal{E}_{it}$  : Disturbance term

Step 2: The market model is applied to determine the normal return. The formula is:

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

Where:

$AR_{it}'$ : Abnormal return of stock i on day t'

$R_{it}'$ : Actual return of stock i on day t'

$R_{mt}'$ : Market return on day t'

Step 3: Daily abnormal return will be summed up to arrive at the CARs over the event period. The formula is

$$CAR_{it} = \sum_{t=1}^t AR_{it}$$

Where

$CAR_{it}$ : Cumulative abnormal return of acquiring firm i over time period t

t: event period

$AR_{it}$ : Abnormal return of stock i on day t

Then t-test is adapted to examine the significance of the CARs. This is the methodology design for research question 1.

To address research question two, a comparison of the CARs between the domestic deals and cross-border deals is undertaken in order to test the differences in returns from domestic announcements versus cross-border announcements.

### **3.4.2 Differences in returns across subsamples**

Independent sample T-test is applied in this study in order to address research question three. Independent sample T-test is firstly applied in full sample, then it is used in domestic and overseas groups. This allows the researchers to determinate if announcement returns are statistically significant different across subsamples and also allows researchers to compare differences between domestic group and overseas group. The subsamples include related versus non-related industries, public versus

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private targets, SOEs versus non-SOEs, stock payment versus cash payment and large acquiring firms versus small acquiring firms.

### 3.4.3 Determinants of returns of acquiring firm shareholders

Multivariate analysis is utilized when addressing research question 4. In line with the research objectives, a set of explanatory variables and control variables are involved to examine the determinants of returns of acquiring firm shareholders in short term. Cumulative abnormal return is utilized as the dependent variable, whilst the firm variables are the independent variables. The empirical analysis are calculated using a multivariate regression model over two event windows, (-1, 1) and (-2, 2) days.

$$CAR = \alpha + \beta_1 \text{Relatedness} + \beta_2 \text{Target status} + \beta_3 \text{Target location} + \beta_4 \text{Ownership structure} + \beta_5 \text{Payment method} + \beta_6 \text{Relative size} + \varepsilon$$

The relatedness variable used is similar to that of Geiger (2010), so as to measure operational synergy. A positive relationship is expected to occur in related firms as deals involving related firms are more likely to achieve synergy. Target status variable is used to investigate the relationship between returns of acquirers and target status. In this study, target status variable captures public targets and private targets following the research of Conn et al. (2005). Target location variable captures domestic markets and overseas markets so as to investigate if target location has an impact on returns of the acquirer. It is similar to study of Goergen and Renneboog (2004) and Nicholson and Salaber (2013). Ownership structure is included because of the unique Chinese economy characteristic that state-owned companies almost dominate the key industries. Chen and Young (2010) find state-ownership structure creates a loss for acquirers, which is in contract to Chi et al. (2011) who establish that state-ownership structure generates profits for acquirers. It appears that the evidence on relationship between state-ownership structure and acquiring firm returns is mixed. The measure standard of state-owned firm is applied the same way as the study of Andreyeva (2000) where a company is deemed as a state-owned company when state owns at least the 50% shares. The data of this variable is found in China Stock Market and Accounting Research (CSMAR) Database which is a major database for Chinese business research. The payment variable includes cash payment, equity payment and combination of cash and equity, which similarly in line with study of Goergen and Renneboog (2004). Finally, the relative firm size is measured by the deal value

divided by the acquirer market value 4 week prior to announcement. Here deal value is a proxy for target size. It is much similar to the study of Walker (2000). Table 3.4.2 overleaf provides a description of the each variable.

<b>Table 3.4.2: Independent variables and hypothesis</b>				
		Definition	Prior studies	Hypothesis based on prior evidence
Key explanatory variables	Target location	Dummy variable.1: if target is an overseas firm; 0: if target is a domestic firm	Black, Doukas, Xing and Cuo (2013)	Negative relationship between of overseas acquisition and acquirers' returns
	Relatedness	Dummy variable.1: if acquirer and target have at least two digit SIC codes. 0: otherwise	Nicholson and Salabar (2013)	Positive relationship between relatedness acquisition and acquirers' returns
	Target status	Dummy variable.1:if target is private firm; 0:public	Fuller, Netter and Stegemoller (2002)	Positive relationship between private firms and acquirers' returns
	Acquiring firm ownership structure	Dummy variable. 1: acquirer has State Own structure. 0 otherwise.	Chen and Young (2010) Chi,Sun and Young (2011)	Positive/ Negative relationship between SOE structure and acquirers' returns
Control variables	Relative firm size	Deal value divided by the market value of acquiring firm	Moeller, Schlingemann and Stulz (2004)	Negative relationship between big firm and acquirers' returns.
	Payment method	Dummy variable. 1: payment in cash; 0: payment in stock	Tuch and O'Sullivan (2007)	Positive relationship between cash payments and returns.

### 3.4 Limitations of the study

There are some limitations to this study primarily due to the data collection and measurement process. Due to the limitations of available data on private acquiring firms, the study only focuses on capturing the wealth effects of public acquiring firms, hence we do not compare the impact of M&A on private acquiring firms. In addition, this empirical study is limited by the small cross-border sample size. China has been witnessed the rapid increase in international M&A markets, but completed deals in



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large deal value (i.e. \$50 million) are still limited. The number of transactions and deal size may increase with the development of Chinese economy and more supportive regulations. This study only examines limited transaction characteristics. For example, the cultural impact and prior merger and acquisition experience are not included in the determinants because it is difficult to get precise data on there. The information of acquiring firms' balance sheet and currency exchange rate are not considered in this study. Furthermore, the longer term wealth effects and qualitative analysis of key shareholders' opinions are not captured in this study.

### **3.5 Conclusion**

The aim of this research lies in analyzing short-term wealth effect in order to detect and categorize determinant variables. To achieve this aim, this chapter commenced with details of data selection, followed by research design and methodology employed. At the end of chapter, a number of limitations are pointed out.

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# Findings

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## **4. FINDINGS**

### **4.1 Introduction**

This chapter presents the research findings and consists of three parts. It commences with the descriptive statistics, followed by the univariate analysis of the short-term wealth effects for acquiring firms. Finally, the multivariate analysis for Chinese acquirers is presented.

### **4.2 Descriptive Statistics**

The sample used for this study consists of 252 Chinese domestic acquisitions and 56 Chinese cross-border acquisitions over the period 2003-2012. However, after applying the sample criteria, Chinese acquiring firms that are listed overseas and do not have full characteristics information are removed. Some companies that would have been gradually building up a stake in the target during one period are also eliminated. Moreover, in order to provide a more accurate result, nine outliers are removed. In total, 173 domestic deals and 31 cross-border deals remaining. This sample size is considered adequate to provide a reliable and comprehensive analysis as a smaller sample size has been used in previous studies. For example, Bhabra and Huang (2013) analyzed 13 cross-border deals and 123 domestic deals during the period 1997-2007.

#### **4.2.1 Overview of deal volume and deal value**

Figure 4.2.1.1 overleaf illustrates the frequency of both domestic and overseas deals volumes from 2003 to 2012. In this sample, no overseas transaction took place in year 2003 and 2004. An increase in overseas deals began from 2005 and experienced a surge in 2007. Overseas acquisition then declined sharply in 2008 due to the impact of global financial crisis and recovered from 2009 onwards. A similar pattern occurred for domestic deals as an initial decline in 2004. Then domestic deals increased gradually from 2005 to 2007, before declining slightly in 2008. Domestic acquisitions

recovered slightly in 2009 but fell off before increasing significantly from 2011 to 2012. As stated previously, the majority of transactions have taken place from 2004, particularly overseas M&As because there have been increasing supportive cross-border M&A regulations implemented.

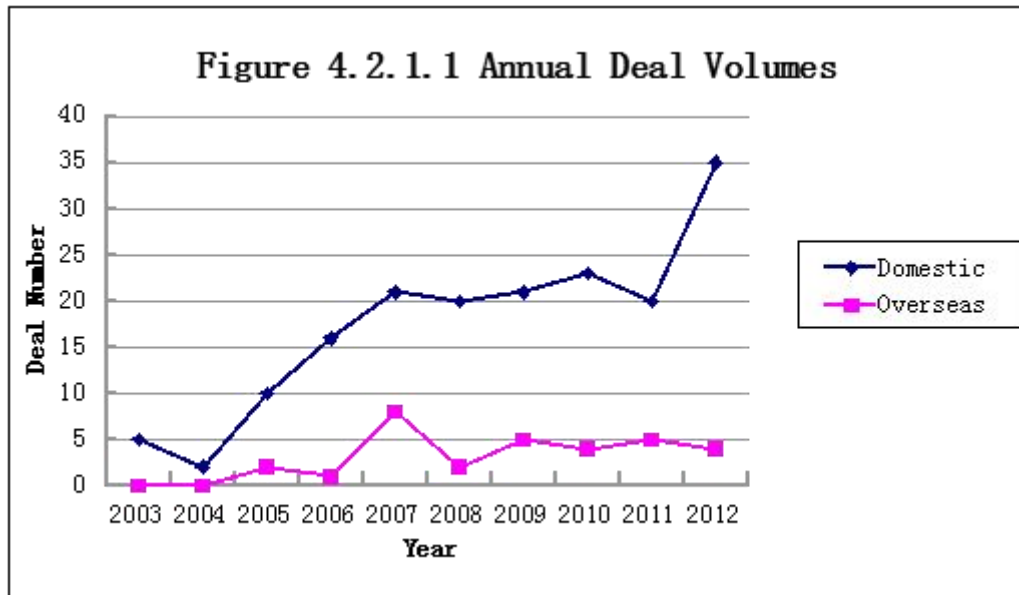


Figure 4.2.1.2 overleaf illustrates the deal value of each year. It can be seen that the annual deal value basically corresponds with the trend of annual volumes for both domestic and overseas deals. However, it is noticeable that domestic deal values in 2008 rose dramatically, which suggests that Chinese acquirers experienced the big appetite in domestic M&A market in 2008.

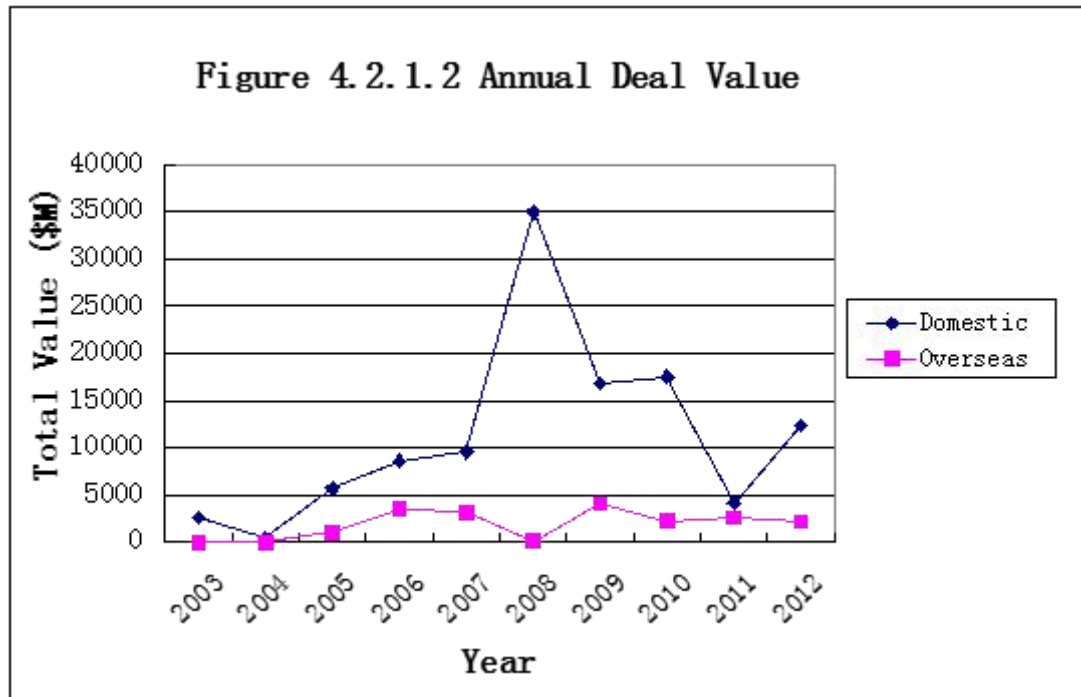


Table 4.2.1.1 presents descriptive statistics of annual deal volume and annual deal value. Panel A shows the descriptive statistics of overseas deals. It can be seen that although the number of deal (8 out of sample) was largest in 2007; the largest average transaction value (\$818.73 million) took place in 2009. It is as twice large as average deal value (\$398.90 million) in 2007. In terms of single transaction, the largest transaction value (\$3501 million) occurred in 2006 and that was by China Petroleum & Chemical Corporation when it acquired Udmurtneft' OAO (Udmurtneft OJSC). Both companies belong in the energy and power industry. The second large deal value (\$2806.88 million) occurred in 2009 when Yanzhou Coal Mining Company Limited acquired Felix Resources Limited. They both belong in the materials industry. It is also can be seen that the number of large value overseas acquisition is still scarce and after 2008 the average annual value experienced a decline except in 2009. It is clear that the global financial crisis did exert the negative impact on Chinese cross-border M&A market.

<b>Table 4.2.1.1: Descriptive statistics of deal volume and deal value</b>					
<b>Panel A: Descriptive statistics of Overseas Deal</b>					
Year	No.of deals	Mean deal value (\$M)	Max value (\$M)	Min Value (\$M)	Total value (\$ M)
2003	0	0	0	0	0
2004	0	0	0	0	0
2005	2	531.68	549.26	514.10	1063.35
2006	1	/	3501.00	/	3501.00
2007	8	398.90	770.79	84.51	3191.18
2008	2	61.57	62.24	60.91	123.15
2009	5	818.73	2806.88	94.27	4093.67
2010	4	559.56	1700.54	107.77	2238.26
2011	5	272.38	443.68	85.58	2618.41
2012	4	129.66	196.70	75.00	2171.79
<b>Panel B: Descriptive statistics of Domestic Deal</b>					
Year	No.of deals	Mean deal value (\$M)	Max value (\$M)	Min Value (\$M)	Total Value
2003	5	515.95	1077.46	100.69	2579.74
2004	2	190.64	221.57	221.57	381.27
2005	10	574.61	2296.86	78.32	5746.05
2006	16	540.01	2173.64	60.00	8640.11
2007	21	454.78	2835.80	66.08	9550.29
2008	20	1748.22	25416.14	51.13	34964.31
2009	21	800.47	5139.46	55.10	16809.86
2010	23	760.99	4312.69	53.29	17502.75
2011	20	209.57	598.97	50.18	4191.33
2012	35	352.13	2416.96	50.68	12324.40

Panel B shows the descriptive statistics of domestic deals. The deal volume increased gradually from 2003 to 2006 and remained in a steady range from 2007 to 2011, varying from 21 to 23, before the surge in 2012 when 35 deals were record in sample. However, the biggest deal value (\$25416.14 million) occurred in 2008 when China Unicom Limited acquired China Netcom Group Corporation (Hong Kong) Limited and both companies belong to telecommunication industry. The annual deal value

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appears to be low even if in 2009.

#### **4.2.2 Firm descriptive statistics**

Table 4.2.2.1 overleaf outlines the target country and regional distribution of the volume and value of deals. The total number of overseas deals in the sample occurred across six regions including 17 countries. There are the same number of deals in Europe and the Americas where account for 32.26% equally. Approximate 19.35% of deals took place in Southeast Asia and 12.9% in Australia. Only one transaction took place in Japan. Deal value occurred in Europe is the largest among these regions making up 41.72% out of total cross-border value. The largest deal value (\$3,501.00 million) happened in Europe raising the total deal value in Europe.

<b>Table 4.2.2.1:</b> Target country distribution and regional distribution of volume and value				
Target location	N	Percentage of domestic /cross-border deals	Value of deals (\$M)	Percentage of domestic /cross-border value
<b>Domestic</b>	173	100%	112690.11	100%
<b>cross-border</b>				
<b>Southeast Asia</b>				
Malaysia	1	3.23	280.369	1.68
Singapore	3	9.68	851.668	5.10
Thailand	2	6.45	709.115	4.24
<b>Total</b>	6	19.35	1841.152	11.02
<b>Europe</b>				
United Kingdom	3	9.68	801.593	4.80
Finland	1	3.23	374.78	2.24
Germany	1	3.23	60.91	0.36
Hungary	1	3.23	1,700.54	10.18
Netherland	1	3.23	148.5	0.89
Russian Fed	1	3.23	3,501.00	20.95
Switzerland	1	3.23	549.26	3.29
Isle of Man	1	3.23	128.62	0.77
<b>Total</b>	10	32.26	7265.203	41.72
<b>Americas</b>				
United States	6	19.35	2066.108	11.86
British Virgin	1	3.23	107.768	0.62
Canada	3	9.68	2826.395	16.23
<b>Total</b>	10	32.26	5000.271	28.71
<b>Japan</b>	1	3.23	166.314	0.95
<b>Australia</b>	4	12.90	3142.756	18.05
<b>Total</b>	31	100.00	17415.696	100.00

Table 4.2.2.2 overleaf reports the distribution of target industries. It can be observed that acquirers have a strong preference for targets in materials, financial service and high technology sector in the domestic M&As. The number of targets in materials industry accounts the highest proportion of 22.54%, and then there are 20.81% targets



in high technology industry and 18.50% targets in financials industry. This is also true for cross-border acquisitions. Targets in materials and high technology industries accounts for the highest proportion, 19.35% equally. Meanwhile, it can be seen that acquisitions in the energy and power sector were more preferred in cross-border deals. Targets in energy and power and financials industries sectors account equal proportion of 12.90%. It suggests the majority acquirers conducted M&As mainly due to strategic resource seeking. Chinese acquiring firms are interested in nature resources and high-technology skills. It is probably driven by growing demand and diminishing resources and the need of improving technology level.

<b>Table 4.2.2.2: Distribution of target industry sector</b>				
Macro Industry	Domestic		cross-border	
	N	%	N	%
Consumer Products and Services	4	2.31%	1	3.23%
Consumer Staples	2	1.16%	1	3.23%
Energy and power	9	5.20%	4	12.90%
Financials	32	18.50%	4	12.90%
Healthcare	9	5.20%	0	0.00%
High technology	36	20.81%	6	19.35%
Industries	14	8.09%	3	9.68%
Materials	39	22.54%	6	19.35%
Media and Entertainment	1	0.58%	3	9.68%
Real estate	13	7.51%	1	3.23%
Retail	7	4.05%	1	3.23%
Telecommunications	7	4.05%	1	3.23%
Total	173	100	31	100.00%

Table 4.2.2.3 overlap depicts the distribution of related acquisitions in the domestic and overseas sample. It is clear that the related deals are less than half of total sample in both domestic and overseas groups. 47.4% domestic deals and 35.48% overseas

deals are deemed related. Furthermore, it can be seen that the majority related deals took place in high technology and materials industries both in domestic and overseas deals. It suggests the motives for Chinese acquirers appear to be varied as more than half of acquirers acquired unrelated targets, however, strategic resource seeking in high technology and materials appears to be the dominant motivation behind Chinese M&As.

**Table 4.2.2.3: Distribution of Relatedness Industries**

Macro Industry	Domestic		cross-border	
	N	% out of 173 deals	N	% out of 31 deals
Consumer Products and Services	1	0.58%	0	0
Consumer Staples	1	0.58%	0	0.00%
Energy and power	5	2.89%	1	3.23%
Financials	6	3.47%	2	6.45%
Healthcare	6	3.47%	0	0.00%
High technology	22	12.72%	3	9.68%
Industries	6	3.47%	1	3.23%
Materials	19	10.98%	3	9.68%
Media and Entertainment	1	0.58%	0	0
Real estate	8	4.62%	1	3.23%
Retail	4	2.31%	0	0.00%
Telecommunications	3	1.73%	0	0.00%
Total	82	47.40%	11	35.48%

More specifically, high technology is a competitive and quick developing industry. It is more advanced in the U.S. and European countries than in China. Thus acquiring foreign high technology companies not only enable Chinese acquirers to get advanced high technical skills and valuable human resource but also enlarge scale into foreign markets. In domestic market, related acquisitions may contribute to build economy of scale. As for material sector, China is a huge consuming economy with the large

population. Growing demand and diminishing resources are heightening the implications from the resources (i.e. metals, mining, and construction materials) purchases.

Table 4.2.2.4 shows the descriptive statistics across firm size. In this study, relative size is the transaction value divided by the acquirers' market value 4 weeks prior to the announcement. It is similar to study of Walker (2000) where relative size is transaction value divided by acquirer equity three months prior to the announcement. The statistics show that targets are smaller contract to the Chinese acquirers in general. The average relative size prior to logging is 0.389 for full sample. In other words, target firms were 38.9% of the size of their acquirers. However, there is a wide range between the biggest deals (i.e. targets are relatively larger compared to the acquirers) and smallest deals. The results imply that some targets are larger than acquirers but in general Chinese M&A market mainly consists of small deals (i.e. targets are relatively smaller compared to the acquirers) and the minority of targets are relatively small. The similar trend is also applied in domestic and cross-border groups.

<b>Table 4.2.2.4: Descriptive statistics of relative firm size</b>				
		Mean	Max	Min
Domestic	Relative size prior to logging	0.395	3.372	0.003
	Log of relative size	-0.911	0.528	-2.521
Cross-border	Relative size prior to logging	0.358	3.789	0.002
	Log of relative size	-0.446	0.579	-2.723
Full sample	Relative size prior to logging	0.389	3.789	0.002
	Log of relative size	-0.829	0.579	-2.723

Table 4.2.2.5 overleaf outlines the sample characteristics of the acquisitions. Panel A

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shows that more than half of deals are diversification (i.e. acquirers and targets are in unrelated industries). This industrial diversification may reflect the graphical diversification for cross-border acquirers. As for payment method that presented in Panel B, in the domestic group, nearly the half of the total transactions (42.77%) were financed only by cash, followed by stock payment (30.64%) and mixed of cash and stock payment (16.18%). In the cross-border group, cash payment is much more widely used than in domestic deals and dominate the majority transactions (83.87%) . It probably because share ownership structures in foreign target firms are highly concentrated so that target shareholders are unwilling to accept foreign shares, especially in continental Europe (Gaughan, 2002). In addition, these statistics may suggests that Chinese acquirers have significant cash resources and want to maintain full control of targets in a less risky way because cash payment can guarantee a outright purchase and avoid the risk of diluting ownership. Panel C reports the statistics of target status. It appears that acquirers prefer private targets (60.69%) in domestic deals. It may attribute to aspects. Firstly, there is less market regulation when acquiring private firms so that acquisitions of private targets may be easier and time-saving. Secondly, some private firms are relatively smaller than acquirers so that it is perhaps easier and affordable for acquirers to make consolidation by frequently buying up small private firms. The proportion of public target (39.31%) is low in domestic deals. It may because acquirers perceive that the acquisition negotiation with public targets would be tough and is likely to result in overpayment for targets. Thus public targets are not so popular as private targets. In cross-border group, public targets and private targets are almost split off. As for ownership structure presented in Panel D, the majority of acquirers are non-State-Owned Enterprises (non-SOEs) in domestic group accounting for 86.12% and 93.54% acquirers are non-SOEs in cross-

border group.

<b>Table 4.2.2.5: Sample characteristics of acquisition events</b>						
	Domestic		Cross-border		Total	
	N	% of 173 deals	N	%	N	% of 31 deals
Panel A: Relatedness						
Related	82	47.40%	11	35.48%	93	45.59%
Unrelated	91	52.60%	20	64.52%	111	54.41%
Total	173	100.00%	31	100.00%	204	100.00%
Panel B: Form of payment						
Cash only	74	42.77%	26	83.87%	100	49.02%
Stock only	53	30.64%	1	3.23%	54	26.47%
Cash and stock	28	16.18%	0	0.00%	28	13.73%
Other (assets, bond, earnout, ect)	18	10.40%	4	12.90%	22	10.78%
Total	173	100.00%	31	100.00%	204	100.00%
Panel C: Target's status						
Public	68	39.31%	16	51.61%	84	41.18%
Private	105	60.69%	15	48.39%	120	58.82%
Total	173	100.00%	31	100.00%	204	100.00%
Panel D: Acquirers' ownership structure						
SOE	24	13.87%	2	6.45%	26	12.75%
Non-SOE	149	86.12%	29	93.54%	178	87.25%
Total	173	100%	31	100%	204	100%

### 4.3 Research question 1:

*What are the wealth effects for shareholders of Chinese acquiring firms following the announcement of a merger or acquisition?*

Table 4.3.1 reports the short-term acquirers' wealth effect for full sample with the Cumulative Abnormal Returns (CARs) during event windows (-2, 2) and (-1, 1).

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<b>Table 4.3.1: CARs of Chinese acquiring firm</b>						
Event window	Mean (%)	Min (%)	Max (%)	T- Stat	P-Value	Cumulative % of Positive Returns
(-2,2)	3.67	-27.61	38.73	4.920	0.000 <sup>**</sup>	60.29%
(-1,1)	2.48	-23.54	29.27	4.175	0.000 <sup>**</sup>	57.35%

<sup>\*\*</sup> Significant at the 5% level

This result indicates that there is a wide range between the minimum CARs and the maximum CARs. The mean CARs are consistently significant positive with the value of 2.48% and 3.68% for the 3-day and 5-day windows respectively. The results are statistically significant (P-value is 0.000) at the 5% level. The percentage of returns are positive over the 5-day and 3-day window in 60.29% and 57.35% respectively. Overall, it suggests that acquisitions are wealth creating for acquirers.

#### **4.4 Research question 2:**

*Are there differences in returns from domestic announcements versus cross-border announcements for acquiring shareholders?*

Table 4.4.1 shows the announcement returns for all domestic transactions and overseas transactions. Domestic deals yield positive announcement returns both in the 5-day (4.48%) and 3-day (3.00%) windows, however, cross-border deals lose 0.08% in the 5-day window and lose 0.04% in the 3-day window. These two groups experienced statistically significant difference in announcement returns over the 5-day window and 3-day window. The percentage of positive returns are higher in domestic deals across two event windows and it can be seen that in cross-border group, more positive returns tend to be captured in the 3-day window.

<b>Table 4.4.1: CARs for Domestic and Cross-border acquisitions</b>										
	Domestic				Cross-border					
Event window	N	Mean (%)	Std. Deviation	Std. Error	N	Mean (%)	Std. Deviation	Std. Error	T-stat	P-value
(-2, 2)	173	4.48	0.110	0.008	31	-0.82	0.612	0.011	-3.799	0.000 <sup>**</sup>
(-1, 1)	173	3.00	0.03	0.088	31	-0.37	0.057	0.01	-2.050	0.042 <sup>**</sup>
Cumulative % of Positive Returns										
(-2, 2)	0.67				0.32					
(-1, 1)	0.60				0.45					

<sup>\*\*</sup> Significant at the 5% level

### 4.5 Research question 3:

*What are the wealth effects for acquiring firm shareholders across various subsamples in terms of transaction characteristics?*

A number of independent tests have been conducted to test the differences of acquirers' wealth effects across subsamples. Table 4.5.1 to Table 4.5.5 present the results of full sample across subsamples. Table 4.5.6 to Table 4.5.10 present results in terms of domestic and cross-border groups across subsamples.

Table 4.5.1 shows announcement returns based on related and unrelated targets. Acquirers of related targets and unrelated targets both earn positive returns over all event windows. It is clear to see that acquisitions of unrelated targets generates higher returns (4.16% under the 5-day window and 2.61% under the 3-day window) for acquirers but the difference of CARs for the two samples is not statistically significant across two windows.

<b>Table 4.5.1: Related versus Unrelated industries of acquirers and targets</b>										
	Relatedness				Unrelatedness				Differential	
Event window	N	Mean (%)	Std. Deviation	Std. Error	N	Mean (%)	Std. Deviation	Std. Error	T-stat	P-value
(-2, 2)	93	2.64	0.0968	0.0100	111	4.16	0.1129	0.0107	-1.021	0.308
(-1, 1)	93	2.12	0.0761	0.0079	111	2.61	0.1129	0.0107	-0.407	0.685

Table 4.5.2 shows the average returns for acquirers of private and public targets. It is evident that the acquisitions of private targets yield much higher announcement returns than acquisition of public targets in 5-day (4.88% versus 1.44%) and 3-day windows (3.22% versus 1.20%). The difference of CARs is statistically significant over 5-day window but insignificant over 3-day window at 5% level. Generally, acquisitions with private targets are deemed to create more wealth for acquirers.

<b>Table 4.5.2: Target status</b>										
	Private				Public				Differential	
Event window	N	Mean (%)	Std. Deviation	Std. Error	N	Mean (%)	Std. Deviation	Std. Error	T-stat	P-value
(-2, 2)	120	4.88	0.1157	0.010	84	1.44	0.0867	0.0095	-2.420	0.016**
(-1, 1)	120	3.22	0.0897	0.0082	84	1.20	0.0744	0.0082	-1.696	0.091

\*\* Significant at the 5% level

Table 4.5.3 reports the acquirers' returns based on acquirers' ownership structure. Both SOEs and Non-SOE acquiring firms are shown positive returns over the two event windows. In addition, returns for SOEs are slightly higher than returns for Non-SOEs under both the 5-day window (3.63% versus 3.44%) and 3-day window (3.78% versus 2.18%). However, the differences between these groups are not statistically significant over the two event windows.

<b>Table 4.5.3: Acquirer's ownership status</b>										
	SOE				Non-SOE				Differential	
Event window	N	Mean (%)	Std. Deviation	Std. Error	N	Mean (%)	Std. Deviation	Std. Error	T-stat	P-value
(-2, 2)	26	3.63	0.1127	0.0221	178	3.44	0.1051	0.0078	0.084	0.933
(-1, 1)	26	3.78	0.0913	0.0179	178	2.18	0.0830	0.0062	0.907	0.366

Table 4.5.4 presents the average return based on relative firm size. The average relative deals size prior to logging is 38.92% for full sample. Specifically, the sample consists of 61 deals which relative deal size is above 38.92% and 143 deals which



relative deal size is below 38.92%. The results implies that the acquirers of larger targets gains positive returns of 6.97% under the 5-day window and returns of 4.9% under the 3-day window, which are much higher than returns for acquirers of smaller targets. The difference between two groups is statistically significant over the 5-day and 3-day windows. It shows that large deals are more value creating in Chinese economy. Furthermore, the differences between the two groups are statistically significant for two event windows.

<b>Table 4.5.4: Relative firm size</b>										
	Above relative firm size				Below relative firm size				Differential	
Event window	N	Mean (%)	Std. Deviation	Std. Error	N	Mean (%)	Std. Deviation	Std. Error	T-stat	P-value
(-2, 2)	61	6.97	0.1308	0.0167	143	1.97	0.0896	0.0075	-2.724	0.008 <sup>**</sup>
(-1, 1)	61	4.90	0.0975	0.0124	143	1.31	0.0755	0.0063	-2.559	0.012 <sup>**</sup>

<sup>\*\*</sup>Significant at the 5% level

Table 4.5.5 reports the acquirers' returns based on the cash payment and stock payment. As it is presented in Table 4.2.2.5, there are 28 deals financed by mix payment of stock and cash and 18 deals financed by other payment (i.e. assets, bond, earnout). These deals are not include in Independent sample T-test. According to the Table 4.5.5, although both cash acquisition and stock acquisition experience positive returns for all window, the CARs for cash financed deals are just slightly higher than zero under the 5-day (0.86%) and 3-day (0.88%) windows. By contrast, stock financed deals yield higher announcement returns with 5.85% over 5-day window and 3.42% over 3-day window. The difference between the CARs for the cash and stock acquisition is statistically significant over 5-day window but insignificant over 3-day window at 5% level. Thus, stock financed deals are regarded as having more value added potential in the Chinese economy on average.

<b>Table 4.5.5: Form of payment</b>										
	Cash				Stock				Differential	
Event window	N	Mean (%)	Std. Deviation	Std. Error	N	Mean (%)	Std. Deviation	Std. Error	T-stat	P-value
(-2, 2)	100	0.86	0.0679	0.0068	54	5.85	0.1328	0.0062	-2.583	0.012 <sup>**</sup>
(-1, 1)	100	0.88	0.0616	0.0062	54	3.42	0.1066	0.0145	-1.614	0.111

<sup>\*\*</sup> Significant at the 5% level

Table 4.5.6 to Table 4.5.10 illustrate the differences in wealth effects of domestic group and cross-border group based on different transaction characteristics.

From Table 4.5.6, it can be seen that the related transactions yield positive returns for domestic deals but yield negative returns for cross-border deals in the 3-day and 5-day windows. The difference between the domestic and cross-border groups is insignificant when targets are related. In comparison, domestic and cross-border deals gained positive returns from unrelated transactions. The difference is significant over the 5-day window suggesting unrelated targets are more value creating for acquirers on average.

Table 4.5.6: Related versus Unrelated industries of acquirers and targets							
(Domestic versus Cross-border)							
		N	Mean (%)	Std. Deviation	Std. Error	T- stat	P-value
CAR (-2,2)							
related	Domestic	82	3.26	0.0993	0.0109	1.714	0.090
	Cross-border	11	-2.01	0.0604	0.0182		
unrelated	Domestic	91	5.05	0.1203	0.0126	2.805	0.007**
	Cross-border	20	0.07	0.0559	0.0125		
CAR (-1,1)							
related	Domestic	82	2.57	0.0774	0.0086	1.558	0.123
	Cross-border	11	-1.21	0.0574	0.0173		
unrelated	Domestic	91	3.16	0.0961	0.0100	1.951	0.057
	Cross-border	20	0.09	0.0009	0.0538		

<sup>\*\*</sup> Significant at the 5% level

Table 4.5.7 overleaf shows that domestic deals yield positive returns through two event windows in deals of public targets and private targets. However, cross-border deals only experienced returns under the 3-day window when targets are public. Statistically significant differences exist between domestic and cross-border group in terms of private targets in both two event windows. Thus private targets are deemed to be more wealth creating in domestic M&As.

Table 4.5.7: Target status (Domestic versus Cross-border)							
		N	Mean (%)	Std. Deviation	Std. Error	T- stat	P-value
CAR (-2,2)							
private	Domestic	105	5.66	0.1192	0.0116	1.995	0.048 <sup>**</sup>
	Cross-border	15	-0.63	0.0674	0.0174		
Public	Domestic	68	1.95	0.0930	0.0112	1.102	0.274
	Cross-border	16	-0.7	0.0486	0.0121		
CAR (-1,1)							
private	Domestic	105	3.88	0.0917	0.0089	2.165	0.032 <sup>**</sup>
	Cross-border	15	-1.40	0.0571	0.0147		
Public	Domestic	68	1.34	0.0789	0.0095	0.355	0.723
	Cross-border	16	0.6	0.0519	0.0129		

\*\*Significant at the 5% level

According Table 4.5.8, acquiring firms with SOE or Non-SOE structure experience positive returns in both the 3-day and 5-day windows in domestic deals while experience negative returns in cross-border deals. There is a statistically significant difference between domestic group and cross-border group over the 5-day window in respect of non-SOE ownership structure.

Table 4.5.8: Acquirer’s ownership status (Domestic versus Cross-border)							
		N	Mean (%)	Std. Deviation	Std. Error	T- stat	P-value
CAR (-2,2)							
SOE	Domestic	24	4.14	0.1159	0.0236	0.805	0.429
	cross-border	2	-2.58	0.0171	0.0121		
Non-SOE	Domestic	149	2.67	0.1104	0.0091	3.337	0.001 **
	Cross-border	29	-0.54	0.0591	0.0109		
CAR (-1,1)							
SOE	Domestic	24	4.19	0.0939	0.0192	0.770	0.449
	Cross-border	2	-1.03	0.0219	0.0155		
Non-SOE	Domestic	149	2.67	0.0867	0.0071	1.785	0.076
	Cross-border	29	-0.32	0.0562	0.0104		

\*\* Significant at the 5% level

Table 4.5.9 shows the impact of relative firm size on acquiring firm shareholders' wealth. Larger deals yield positive returns in both domestic and cross-border deals over the 3-day and the 5-day windows. As for smaller deals, domestic deals lose 1.18% over the 5-day window and cross-border deals lose 1.71% over the 3-day window. A statistically significant difference between domestic and cross-border group exist over the 3-day window in terms of smaller relative size group.

Table 4.5.9: Relative firm size (Domestic versus Cross-border)							
		N	Mean (%)	Std. Deviation	Std. Error	T- stat	P-value
CAR (-2,2)							
Above Avg. Size	Domestic	52	7.96	0.1359	0.0188	-1.431	0.158
	Cross-border	9	1.25	0.0800	0.2668		
Below Avg. Size	Domestic	120	-1.18	0.0461	0.0096	-1.855	0.066
	Cross-border	23	2.57	0.0947	0.0086		
CAR (-1,1)							
Above Avg. Size	Domestic	52	5.15	0.1017	0.0141	-0.479	0.633
	Cross-border	9	3.45	0.0719	0.0239		

Below	Domestic	120	1.90	0.0796	0.0073	-3.358	0.001 **
Avg. Size	Cross-border	23	-1.71	0.0379	0.0079		

\*\*Significant at the 5% level

According to Table 4.5.10, both cash and stock financed deals yield positive return for domestic deals over the 3-day and 5-day windows but only stock financed deals yield positive return for cross-border deals. It should be noted that due to small cross-border sample, only one cross-border deal is financed by stock. This is likely to reduce the accuracy of result.

Table 4.5.10: Form of payment (Domestic versus Cross-border)							
		N	Mean (%)	Std. Deviation	Std. Error	T- stat	P-value
CAR (-2,2)							
Cash	Domestic	74	1.72	0.0718	0.0083	2.154	0.194
	Cross-border	26	-1.56	0.0489	0.00959		
Stock	Domestic	53	5.78	0.1339	0.0184	/	/
	Cross-border	1	9.37	/	/		
CAR (-1,1)							
Cash	Domestic	74	1.68	0.0660	0.0077	2.249	0.149
	Cross-border	26	-1.42	0.0397	0.0078		
Stock	Domestic	53	3.18	0.1339	0.0184	/	/
	Cross-border	1	15.79	/	/		

#### 4.6 Research question 4:

*How do the transaction and firm characteristics, such as industry relatedness, ownership structure of the acquiring companies, target status and target location, payment method and firm size influence acquiring firm shareholder returns?*

Multivariate analysis is applied to examine the impact of transactions characteristics on acquirers' return during the 5-day window and 3-day window. These two event windows also used for regression model in previous studies, such as Bhabra and Huang (2012). Independent variables are explained in section 3.4.3. There are six

regression models reported in Table 4.5.1 overleaf. Model 1 to 3 is for the 5-day window and Model 4 to 6 is for the 3-day window. Model 1 and 4 consist all of the variables. Model 2 and 5 are regressions with 4 transaction variables and one control variable, the form of payment. This study only investigates the impact of cash payment and stock payment on shareholders' wealth effects so that mix payment deals and other payment deals are not included when running regression 1, 2, 4 and 5. Model 3 and 6 consist of 4 transaction variables and one control variable, relative firm size.

**Table 4.5. 1: Multivariate Analysis: The determinants of CARs**

	CAR (-2,2)			CAR (-1,1)		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
constant	0.021 (0.288)	0.046 (0.011)	0.012 (0.467)	-0.007 (0.653)	0.026 (0.079)	-0.001 (0.964)
Transaction variables						
Target location (overseas target)	-0.032 (0.146)	-0.021 (0.331)	-0.044 (0.029) <sup>**</sup>	-0.032 (0.074)	-0.017 (0.345)	-0.027 (0.088)
Relatedness	0.005 (0.732)	0.001 (0.993)	-0.004 (0.786)	0.012 (0.361)	0.004 (0.737)	0.004 (0.731)
Target status	0.020 (0.218)	0.024 (0.146)	0.027 (0.076)	0.004 (0.747)	0.01 (0.487)	0.014 (0.246)
SOE	0.017 (0.467)	0.014 (0.555)	0.006 (0.801)	0.023 (0.213)	0.019 (0.328)	0.022 (0.204)
Control variables						
Cash payment	-0.028 (0.138)	-0.048 (0.006) <sup>**</sup>		0.003 (0.824)	-0.024 (0.099)	
Relative size	0.047 (0.011) <sup>**</sup>		0.039 (0.002) <sup>**</sup>	0.064 (0.000) <sup>**</sup>		0.041 (0.000) <sup>**</sup>
N	154	154	204	154	154	204
R square	0.128	0.089	0.098	0.154	0.046	0.110
F	0.002 <sup>**</sup>	0.016 <sup>**</sup>	0.001 <sup>**</sup>	0.000 <sup>**</sup>	0.222	0.000 <sup>**</sup>

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Adjusted R square	0.093	0.058	0.075	0.120	0.013	0.088
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\*\*Significant at the 5% level

#### 4.6.1 Transaction variables

According to the Table 4.5.1, the explanatory power (Adjusted R square) for six models is vary from 1.3% to 9.3%. This is lower than that in previous studies, for example, Bhabra and Huang (2012) report that Adjusted R square was vary from 5.3% to 15.2% across six regressions over the 3-day and 5-day windows. Thus it suggests that explanatory power of the regressions is weak.

The coefficient of the target region variable is negative in all models and is only statistically significant in model 3 at the 5% level. It suggests acquirers' wealth effects are negatively influenced by cross-border M&As but impact is only significant over the 5-day window. The relatedness variable, target status variable and ownership structure variable are all positive but insignificant through six regressions. It indicates that these factors positively influence the acquirers' announcement returns but lack of statistical significance.

#### 4.6.2 Control variables

Control variable includes payment method and relative firm size. One of the surprising results is that cash payment results in a negative impact to acquirer announcement returns. It is statically significant at the 5 % level for the 5-day window when relative firm size variable is excluded but it is insignificant for the 3-day window. This is in contrast to the majority evidence of the UK and the U.S. markets where cash payment has positive impact on acquirers' wealth. The coefficient of relative firm size is positive for all models and statistically significant at the 5% level in both the 3-day and 5-day window. This indicates that large deals (i.e. the targets are relatively larger than the acquirers) are more value creating than small deals, which

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supports the univariate results presented in section 4.5.

Overall, the multivariate analysis suggests that three variables (i.e. target location, target status and relative firm size) are statistically significant. In other words, these three factors are key determinants of Chinese acquirers' announcement returns. Overseas targets bring significantly negative influence on acquirers' wealth effect and private targets and large deals bring significantly positive influence on acquirers' wealth effects, although the significance of target location and target status variable is limited to the 5-day window.

Table 4.5.2 presents the comparison between hypothesized provided in chapter three and actual event study results.

<b>Table 4.5.2:</b> Comparison of Hypothesized direction with Actual Findings		
	Hypothesized	Actual
Target location	Negative	Negative and some statistical significance
Relatedness	Positive	Positive but not statistically significant
Target Status	Positive	Positive but not statistically significant
SOE	Mixed	Positive but not statistically significant
Payment Method	positive	Negative and some statistical significance
Relative Size	Negative	Positive and statistically significant

## 4.6 Conclusion

This chapter presents the findings of the study in terms of descriptive statistics and event study results. The next chapter will discuss more details about these findings and compare them with previous literatures.



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# Discussion

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## **5. DISCUSSION**

### **5.1 Introduction**

This chapter presents the details of interpretation and discussion of research findings. Firstly, the total wealth effects of Chinese acquiring firms are discussed, followed by a discussion of wealth effects in respects of various transaction characteristics. Finally, the results of regression are discussed.

### **5.2 The total announcement returns of Chinese acquiring firm shareholders**

This study examines the Chinese acquiring firm shareholders' announcement returns over the 3-day and 5-day windows. The findings show that the average cumulative abnormal returns (CARs) are positive over all event windows and statistically significant at 5% level. This result is in line with several Chinese M&A studies documented in chapter two, such as Chi et al (2009), Bhabra and Huang (2013) and Nagano and Yuan (2013). Meanwhile, this result is similar to study of Ma et al. (2009) where mean CARs for (-1, 1) and (-2, 2) are 1.28% and 1.70% respectively and statistically significant at the 1% level among ten Asian markets. However, this result is contrary to evidence of the evidence of Gregory and O'Donohoe (2014) that acquiring firms experienced negative returns of 1.07% involved in acquisitions of the UK listed targets over the 5-day window. Thus, it appears that stock market responses positively to acquisitions by Chinese acquiring firms and creates wealth for acquiring firm shareholders around the announcement date. Furthermore, the larger positive returns found in this study may due to the research time frame covering the latest Chinese economy development period after the global financial crisis. The global financial crisis reduced the some economic imbalances between China and other countries. Furthermore, Chinese firms build the wilder trade relationship around the world and become the one of main export countries after the global financial crisis (Garrett, 2011). This probably leads the result that Chinese acquiring firm shareholders generally gain positive returns from mergers and acquisitions activities.

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### **5.3 The difference between Chinese domestic and cross-border M&A**

The difference of announcement returns in respect of domestic M&As and cross-border M&As is investigated in this study. For full sample, the returns to Chinese acquirers are significant positive for domestic M&As while insignificant negative for cross-border M&As. This result is comparable with findings of Bhabra and Huang (2013) that acquirers experience negative returns in cross-border M&A and gain positive returns in domestic M&A over the 3-day and 5-day windows. Similarly, Black et al. (2013) who find that Chinese acquirers lose 0.58% in cross-border transactions and gain 2.76% in domestic transactions over the 3-day window. Furthermore, this result is partly consistent with the evidence of Switzerland. Lowinski, Schiereck and Thomas (2004) find domestic deals yield higher CARs than cross-border deals but there is no significant difference between two groups. However, this is in contrast to studies of Nagano and Yuan (2013). They report the positive returns in Chinese cross-border M&A over the 3-day window. Similarly, Ning et al. (2014) also find positive returns for acquirers in cross-border deals over the 3-day and 5-day windows. The result of this study is also against the findings of Bhagat et al. (2011) that cross-border M&As create positive returns for acquirers in eight emerging markets. They claim that the positive returns are related to higher standard of corporate governance in target countries. However, we can draw this conclusion based on this study as the standard of corporate governance is not investigated. More specifically, announcement returns are different in domestic group and cross-border group across different transaction characteristics. The details are discussed in section 5.4.

### **5.4 Acquirers' wealth effect across various subsamples**

The univariate analysis is applied to examine acquirers' wealth effect among full sample, domestic and cross-border groups across different subsamples.

#### **5.4.1 Relatedness target and Acquirers' returns**

Among full sample, unrelatedness acquisitions create more positive return than relatedness acquisitions even though difference is insignificant. This is contrary to result of Bhabra and Huang (2013) and O'Donnell (2013). They all find positive market reaction to relatedness M&A and negative market reaction for unrelated M&As. In relation to domestic group and overseas group, unrelated acquisitions also

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outperform the relatedness acquisitions. Moreover, the finding shows that acquisitions of unrelated target dominate the majority deals in both domestic group (52.6%) and overseas group (64.5%). It appears that Chinese acquisitions are tended to be driven by diverse range of motives and related M&As mainly generate synergistic benefits for Chinese acquiring firm in domestic deals. This finding is not surprising as it may illustrate that Chinese companies buy unrelated targets to make consolidation in their economies of scale. Furthermore, high proportion and positive returns of unrelated deals may due to risk averse of acquiring firms. Buckley, Clegg, Cross, Liu, Voss and Zheng (2007) point that Chinese outward FDI are partly driven by risky aversion and diversification is deemed as a good way to reduce the risk of the acquired company, particularly for cross-border M&A. Thus unrelated deals are more likely to realize positive returns for Chinese acquirers.

#### **5.4.2 Target status and Acquirers' returns**

The finding reports that private targets make up the majority of firms acquired through full sample M&A and acquisition of private target creates higher positive returns for acquirers. This is consistent with the majority M&A literatures. Croci et al. (2010) find public targets generate loss for the UK acquirers while private targets generate positive returns for acquirers over the 5-day window. More recently, Nagano and Yuan (2013) find that Chinese acquirers gain higher wealth when target is private over the 3-day window. However, cross-border groups experience negative returns in both acquisition of public and private target. It is inconsistent with the finding of Conn et al. (2005). They find positive returns are driven by acquisitions of private targets for UK acquirers in both domestic and cross-border deals.

Acquirers face different situations of negotiation in terms of public targets and private targets. When acquiring a private target, the acquirer usually deal with a few target shareholder directly and private target shareholders might be likely to sell firm. In that case, the acquirer is less likely to overpay for the target and might be benefit from providing a liquidity service (Moeller et al., 2004). Therefore, acquirers of private targets are always associated with high positive returns. Generally, Chinese stock market reward Chinese acquirers of private target, especially in domestic deals, which in line with the evidence of developed markets. Chinese acquirers also prefer private targets in domestic deals.

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### **5.4.3 Form of payment and Acquirers' returns**

The finding shows that stock deals have better performance than cash deals. Particularly in cross-border M&As, only stock deals yield the positive returns. This result is contrary to the evidence of Bhabra and Huang (2013), who find positive CARs for cash acquirers and negative CARs for stock acquirers. However, this result is consistent with finding of O'Donnel (2013) who investigates Japanese domestic M&A and finds negative CARs for cash acquirers and positive CARs for stock acquirers over the 3-day window. Black et al. (2012) who also find stock payment deals gain higher positive returns than cash payment deals. This result is also similar to the UK evidence, found by Conn et al. (2005), that returns of cash deals are worse than noncash deals for UK acquirers.

This result may be explained by Free Cash Flow Theory that managers with substantial free cash flow in acquiring firm are likely to invest in low return projects or wasted due to agency conflict (Jensen, 1987). Furthermore, Table 4.2.2.5 reveals that Chinese acquirers prefer use cash payment (49.02% of full sample) than stock payment (26.47% of full sample). This probably because majority Chinese acquiring firms want to get full control of targets, however, agency conflict is likely to exert the widely negative impact on Chinese firms so that cash payment would have reduce the acquiring firm shareholders' wealth. It is particularly true for some Chinese acquiring firms whose managers eager to expand operation in overseas market lack of considering the shareholders' interest.

On the other hand, the positive return for stock acquirer may be associated with the Investment Opportunity Hypothesis that acquiring firms are likely to finance acquisition by stock in order to preserve cash for good future growth opportunities (Martin, 1996). This is probably a positive signal to market. Furthermore, stock payment is likely to reduce the agency problem associated with substantial cash.

### **5.4.4 Ownership structure and Acquirers' returns**

The finding shows that among full sample, SOEs acquiring firms gain higher positive returns than non-SOEs acquiring firms but difference is insignificant across full sample. It is consistent with the findings of Bhabra and Huang (2013). They find that the CARs of SOEs slightly exceed that of non-SOEs and the difference is also insignificant. By contrast, Kam et al. (2008) find highly positive returns for non-SOE acquirers but it is under a relatively longer event window, 81-day window. The better

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performance of the SOE acquiring firms perhaps attributes to the strict government supervision. As a result, it are likely reduce the possibility of irrational deals. This study also shows that SOE and non-SOE acquirers experienced a loss in cross-border M&As. This negative drift again firstly may be associated to Free Cash Flow theory as discussed in cash payment deals as only one deal is stock payment in cross-border group. Secondly, as mentioned in chapter two, developed economies become increasing sensitive to Chinese SOE acquirers and put barriers to these acquirers as SOE acquirers always acquire targets with political motivation. Thus, the wealth of acquiring firm shareholders can be deceased.

#### **5.4.5 Relative firm size and Acquirers' returns**

The relative firm size is measured by the deal value (i.e. a proxy for the target) divided by the acquirer market value 4 week prior to announcement. The findings show that acquirers of relatively larger targets experienced higher positive returns than acquirers of smaller targets and the difference is statistically significant over two event windows. This suggests that the large deals are deemed to be value creating in Chinese economy. This result is partly consistent with O' Donnel (2013) who find that large deals bring positive returns for Japanese acquirers but no significant difference exists between large size group and small size group. However, this result is inconsistent with Moeller et al. (2004) who find announcement returns for small acquirers are higher than large acquirers. The findings also show that Chinese market mainly consists of small deals. It probably the majority Chinese companies consolidate their economic scale and scope by frequently buying up small targets. On the other hand, however, higher returns are associated to relatively larger deals. When targets are relatively larger than acquirers, by buying a target the acquirer may have more significant performance after acquisitions in terms of in increasing market power and exploiting acquired resource (Filipovic, 2012). Thus, the relatively larger deals yield positive returns for Chinese acquirers.

In summary, domestic M&As outperform cross-border M&As. In this study, the majority cross-border M&As are financed by cash. Consequently, free cash flow theory is probably the main reason that Chinese acquirers generally experience negative announcement return in cross-border M&As. On the other hand, cross-border M&As create positive returns for acquirers but largely dependent on the unrelated targets, large deal size and stock payment.

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## **5.5 Determinants of acquiring firm shareholders' wealth**

This study examines the determinants of Chinese acquirers' announcement returns. The multivariate analysis is used to address if independent variables have positive or negative impact on shareholders' wealth.

### **5.5.1 Transaction variables**

The dummy variable, target location, measures whether the targets are located overseas. It is explained in section 3.4.3. The coefficient of target location is negative and significant over the 5-day window suggesting overseas targets negatively impact the Chinese acquirers' returns at the 5% level of significance. The similar result was found by Black et al. (2013) that market responses negatively to cross-border deals at the 5% level over the 3-day window. This negative relationship between acquirers' returns and overseas targets may attribute to two aspects. Firstly, due to small sample size, cross-border deals in this study are primarily financed by cash and cash payment creates loose for acquirers, which is explained in section 5.4.3. Secondly, even if acquiring an existing target in overseas market is an effective method to build a international operation system, cultural distance may be a challenge for Chinese acquirers. In this study, the majority overseas target located in Europe and Americas. Chinese acquiring firms are likely to encounter a high culture clash in language, politics and business pattern (Nicholson and Salaber, 2013).

The coefficients of relatedness variable, target status variable and SOE variable are all positive. This implies that acquisitions in the related industries have positive impact on acquirers' returns. Private targets and SOE structure also have positive impact on acquirers' wealth. However, these variables are insignificant over the 5-day and 3-day windows. Therefore, these variables are not the key determinants of Chinese acquirers' wealth.

### **5.5.2 Control variables**

The control variables include payment variable and relative size variable. The coefficient of payment variable is negative and it is significant over the 5-day window. This indicates that acquirers' announcement returns are negatively influenced by cash payment. The result against the hypothesis presented in chapter 3, but supports the univariate analysis. Similarly, Black et al. (2013) also find that pure cash payment is associated with significantly negative returns. As it is stated in chapter 4, Chinese

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acquiring firms prefer cash payment probably because they have substantial cash resource and want to get full control of targets and but agency problem make cash payment become less value creating. The Relative Size variable is significantly positive over two event windows suggesting relatively large targets have significantly positive impact on acquirers' wealth in short term. This result supports the univariate analysis and is partly in line with the findings of Black et al. (2013) that there is a positive relationship between large deals and acquirers' returns over the 3-day window. As it is stated in 5.4.5, large acquiring firms are likely to associate with hubris problem. Thus in the situation that target firms are relatively smaller than acquiring firms, managers in acquiring firms may be too overconfident to overestimating the value of targets. Consequently, it destroys the acquiring firm shareholders' wealth. Thus compared to acquisition of small targets, acquisitions of relative large targets are more value creating in Chinese M&A market.

In summary, multivariate analysis shows that the overseas targets, payment variable and relative firm size have significant effects on the Chinese acquirers' announcement returns. The key determinants that found in this study are less than that in pervious literatures. This probably due to time frame used in this study is different from other literatures.

## **5.6 Conclusion**

This chapter discusses the more details of findings and compares it to the prior M&A literature. The next chapter presents that conclusion of this study and identified the potential areas for further research.



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# Conclusion

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## 6. CONCLUSION

### 6.1 Overview

The purpose of this study is to investigate short-term wealth effects for Chinese acquiring firm shareholders following the announcement of Chinese domestic M&As and cross-border M&As and to investigate the determinants of acquiring firm shareholders' wealth effects. An event study is used with market model in order to calculate the Cumulative Abnormal Returns (CAR) over the 3-day and 5-day event windows. The results indicate that Chinese acquirers experience the highly positive returns and the returns are statistically significant under the two event windows. It suggests that Chinese stock market response positively to acquiring firms on average. Univariate analysis is utilized to investigate difference in returns across various transaction characteristics, followed by multivariate analysis to explore the key determinants of shareholders' wealth. The findings show that domestic M&As are more profitable than cross-border M&As and the difference between the two group is statistically significant. The multivariate analysis partly support the findings that overseas targets have significant negative influence on acquirers' wealth over the 5-day window. In relation to form of payment, the findings show that cash payment is widely used in Chinese M&A but higher positive returns accrue to acquirers in stock deals and the difference between cash deals and stock deals is statistically significant over the 5-day window. Acquirers even experience a loss in cash deals in cross-border M&A. This is partly consistent with multivariate analysis that cash payment has a negative relationship with returns. Furthermore, the form of payment is found to be a significant determinant on returns. It may indicate that Chinese acquirers have more cash resource and want to get full control of targets, however, further evidence of acquirers' cash flow information need to be supported by data of balance sheet and it is not investigated in this study. In comparison, the stock payment turn to be more profitable as debt holders are more effective to monitor managers' behavior so that agency problem can be reduced and managers are more likely to create wealth for shareholders. The findings also show that there is a significant difference between relatively large acquirers and small acquirers. Relatively small acquirers outperform larger acquirers in domestic and cross-border groups and generate higher returns overall. Multivariate analysis confirms this result and suggests that relatively larger

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firms have negative and significant influence on acquirers' wealth. It may due to large firms are better to realize the synergies. The study reveals that the motivations behind the Chinese M&A are diversified as the majority targets are unrelated and higher returns are accrued to acquirers when targets are unrelated. However, statistically insignificant coefficient of Related target that found in multivariate analysis suggests this factor has no major impact on acquiring firm shareholders' wealth, despite its coefficient is positive and consistent with the univariate analysis. Other independent variables including Target status and ownership structure are insignificant suggesting they are not the key determinants on Chinese acquiring firm shareholders' wealth.

## **6.2 Limitations and Future research**

There are certainly limitations in this study. They are summarized below along with some recommendations of future research areas. First of all, this study only focuses on the short-term announcement effects on Chinese public acquirers. It may difficult to examine the announcement effects on private acquiring firms due to lack of available data. However, a comparative study could investigate announcement effects on target firm shareholders in order to provide comprehensive evidence on Chinese M&As. The event window could also be extended to examine the long-term wealth effects of the deals. The sample size of cross-border deals is small in this study may due to large transaction value (\$50 million) criteria is applied. In the future research, this issue may be resolved as Chinese economy is developing so as there will be the increasing number of large cross border deals. This study does not investigate the impact of currency exchange rate on acquirers' wealth and does not consider the information of balance sheet. It is highly recommended for future research to take into account these two factors, which help to interpreter acquirers' preference in terms of different exchange rate and the financial situation and cash flow information of acquiring firms.

Additionally, due to the limited number of transaction characters, the study does not examine the comprehensive picture of determinants of shareholders' wealth. Thus, future research might need to consider more factors, such as cultural distance, pre-acquisition experience, market to book ratio, corporate governance, foreign regulation and tax regimes to discover the additional determinants of shareholders' wealth. Furthermore, the time frame is recommended to be expanded. It allows researchers make a comparison among different time periods and may also increase sample size.

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## APPENDICES

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### **Appendix A: Personal reflections on the dissertation project**

This dissertation is the most challenging and long-lasting project of the MBS year. During this process, I have experienced a lot of emotions including confusion, panic, depression, excitement, and relieved. Finally, I am very satisfied with my effort as everything is paid off. Not only I gain new knowledge about mergers and acquisitions and have deeper understanding of Chinese economy, also I have improved my learning skills.

The dissertation process started in the early of the first semester. At that time, I felt worried and lost because I did not know where to begin and I even had no idea about qualitative or quantitative research method. After the meeting with teachers, I got some ideas on mergers and acquisitions and decided to choose Chinese M&A as my theme. I think this topic is not too fashion to collect information and there should be some aspects deserved to research in Chinese market due to the growing of Chinese economy. Choosing a general direction is just the first step. Then I fell lost again because I was not sure how to specific my research purposes to establish a logical structure. After the first meeting with my supervisor, I got a helpful guidance that it is more realistic for me to use quantities research method to investigate stock price reaction to Chinese M&A announcement. I also got clear my research direction. Under this useful guidance, I began to collect information for literature review part. At first, I felt like I was flooded by the literature ocean. I pushed myself calm down to search the relevant information. Gradually, I found my scan reading skill was improved, which helped me become more effective in collecting evidence. Then as I approaching to the methodology part, I felt the whole structure of this research became clearer and I had better understanding about what I should do next. I have to say, however, I encountered the most struggling and time consuming part, the finding part, after final exams. Maybe due to the relax atmosphere in summer holiday, I was easily to be distracted by negligible things. Furthermore, long-time facing to the computer and sorting lots of data make me feel bored and exhausted. I even felt depressed as sometimes I thought I nearly solved the problems but a new one popped up. On the other hand, I have to admit that the finding process is the part that makes



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me feel proud. Firstly, I used the knowledge that I have learned (e.g. Econometrics, Corporate financial interpretation, Quantities date analysis) to analyze my sample. It is definitely a wonderful feeling that I do think I absorb useful knowledge and convert it into my own knowledge to conduct my research. I have never felt such strong sense of achievement until this dissertation project. Secondly, this experience makes me become more patient when facing the one problem after another. Problems are not unsolvable. I found as long as I calm down and be patient, I can always find a way to address problems.

Doing research and finishing the dissertation within such limited time force me become more organized on every detail. I still remember that I made a meeting with my supervisor but I sent my paper very late because it took longer to finish that chapter than I expected. As a result, the meeting became pointless as supervisor did not have enough time to criticize it. It wasted both of our time. This gave me a lesson that I should respect others' schedule and use my time and supervisor's time wisely.

Overall, the dissertation process is a reward. I believe that the specialist knowledge and the skills (i.e. Data analysis by SPSS, skill of using word and excel) I have gained from this experience will assist my future career development.

## Appendix B: Correlation Matrix and Variance Inflation Factor (VIF) statistics

Correlations								
		CAR5day	Targetlocation	RelatedIndustry	TargetStatus	OwnershipStructure	PaymentMehod	RelativeSize
CAR5day	Pearson Correlation	1	-.177*	.010	.124	.037	-.243**	.261**
	Sig. (2-tailed)		.028	.898	.126	.645	.002	.001
	N	154	154	154	154	154	154	154
Targetlocation	Pearson Correlation	-.177*	1	-.112	-.153	-.091	.303**	.054
	Sig. (2-tailed)	.028		.166	.058	.264	.000	.509
	N	154	154	154	154	154	154	154
RelatedIndustry	Pearson Correlation	.010	-.112	1	-.105	.075	-.040	-.134
	Sig. (2-tailed)	.898	.166		.193	.358	.624	.097
	N	154	154	154	154	154	154	154
TargetStatus	Pearson Correlation	.124	-.153	-.105	1	.204*	.079	.029
	Sig. (2-tailed)	.126	.058	.193		.011	.333	.723
	N	154	154	154	154	154	154	154
OwnershipStructure	Pearson Correlation	.037	-.091	.075	.204*	1	.183*	-.135
	Sig. (2-tailed)	.645	.264	.358	.011		.023	.095
	N	154	154	154	154	154	154	154
PaymentMehod	Pearson Correlation	-.243**	.303**	-.040	.079	.183*	1	-.385**
	Sig. (2-tailed)	.002	.000	.624	.333	.023		.000
	N	154	154	154	154	154	154	154
RelativeSize	Pearson Correlation	.261**	.054	-.134	.029	-.135	-.385**	1
	Sig. (2-tailed)	.001	.509	.097	.723	.095	.000	
	N	154	154	154	154	154	154	154

\*, Correlation is significant at the 0.05 level (2-tailed).

\*\*, Correlation is significant at the 0.01 level (2-tailed).

### Coefficients<sup>a</sup>

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Targetlocation	.822	1.217
	RelatedIndustry	.948	1.055
	TargetStatus	.906	1.104
	OwnershipStructure	.906	1.104
	RelativeSize	.794	1.259
	PaymentMehod	.705	1.418

a. Dependent Variable: CAR5day

**Correlations**

		CAR3day	Targetlocation	OwnershipStructure	RelatedIndustry	TargetStatus	PaymentMehod	RelativeSize
CAR3day	Pearson Correlation	1	-.146	.078	.043	.074	-.151	.332**
	Sig. (2-tailed)		.072	.338	.600	.363	.062	.000
	N	154	154	154	154	154	154	154
Targetlocation	Pearson Correlation	-.146	1	-.091	-.112	-.153	.303**	.054
	Sig. (2-tailed)	.072		.264	.166	.058	.000	.509
	N	154	154	154	154	154	154	154
OwnershipStructure	Pearson Correlation	.078	-.091	1	.075	.204*	.183*	-.135
	Sig. (2-tailed)	.338	.264		.358	.011	.023	.095
	N	154	154	154	154	154	154	154
RelatedIndustry	Pearson Correlation	.043	-.112	.075	1	-.105	-.040	-.134
	Sig. (2-tailed)	.600	.166	.358		.193	.624	.097
	N	154	154	154	154	154	154	154
TargetStatus	Pearson Correlation	.074	-.153	.204*	-.105	1	.079	.029
	Sig. (2-tailed)	.363	.058	.011	.193		.333	.723
	N	154	154	154	154	154	154	154
PaymentMehod	Pearson Correlation	-.151	.303**	.183*	-.040	.079	1	-.385**
	Sig. (2-tailed)	.062	.000	.023	.624	.333		.000
	N	154	154	154	154	154	154	154
RelativeSize	Pearson Correlation	.332**	.054	-.135	-.134	.029	-.385**	1
	Sig. (2-tailed)	.000	.509	.095	.097	.723	.000	
	N	154	154	154	154	154	154	154

\*\*. Correlation is significant at the 0.01 level (2-tailed).

\*. Correlation is significant at the 0.05 level (2-tailed).

**Coefficients<sup>a</sup>**

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Targetlocation	.822	1.217
	RelatedIndustry	.948	1.055
	TargetStatus	.906	1.104
	OwnershipStructure	.906	1.104
	RelativeSize	.794	1.259
	PaymentMehod	.705	1.418

a. Dependent Variable: CAR3day

## Appendix C: Acquirer Information

Announcement date	Acquirer	Thomson Ticker	Acquirer Macro Industry	SIC Code	1 if acquirers related with target
12/19/2012	Neo Solar Power Corp	3576-TW	High Technology	3674	1
12/15/2012	Aluminum Corp of China Ltd	601600-SH	Materials	3334	0
10/30/2012	Hangzhou Huaxing Chuangye	300025-SZ	Consumer Products and Services	8734	0
10/30/2012	HL Technology Group Ltd	1087-HK	High Technology	3357	0
10/30/2012	Baoshan Iron & Steel Co Ltd	600019-SH	Materials	3312	1
10/29/2012	Shandong Gold Mining Co Ltd	600547-SH	Materials	1041	1
10/25/2012	Anhui Shengyun Mach Co Ltd	300090-SZ	Industrials	3535	0
09/28/2012	CNNC Hua Yuan Titanium Dioxide	002145-SZ	Materials	2819	1
09/13/2012	Walvax Biotechnology Co Ltd	300142-SZ	Healthcare	2836	1
09/13/2012	Lextar Electronics Corp	3698-TW	High Technology	3679	1
08/30/2012	Baoxin Auto Group Ltd	1293-HK	Retail	5511	1
08/24/2012	Chengdu B-Ray Media Co Ltd	600880-SH	Media and Entertainment	2752	0
08/03/2012	E Ink Holdings Inc	8069-OT	High Technology	3679	1
08/01/2012	Tiancheng Co Ltd of Taiyuan	600392-SH	High Technology	7372	0
07/30/2012	China Development Financial Hldg Corp	2883-TW	Financials	6099	0
07/13/2012	Sichuan Yahua Ind Grp Co Ltd	002497-SZ	Materials	2892	1
07/12/2012	Tangshan Jingyuan Yufeng Electric	002049-SZ	High Technology	3679	1
06/22/2012	MediaTek Inc	2454-TW	High Technology	3674	1

06/15/2012	Wuhan Humanwell Healthcare	600079-SH	Healthcare	2836	0
06/09/2012	Shanghai Luxin Packing	002565-SZ	Materials	2671	1
05/18/2012	Hangzhou Zhongheng Electric Co	002364-SZ	Energy and Power	3613	0
05/17/2012	Xinxing Ductile Iron Pipes Co	000778-SZ	Materials	3321	0
05/05/2012	China Mehoco Corp	600056-SH	Healthcare	2834	1
05/04/2012	Science City Development Public Co	000975-SZ	Media and Entertainment	7011	0
04/10/2012	Zhejiang Daily Media Grp Co	600633-SH	Media and Entertainment	7311	0
04/05/2012	China Development Financial Hldg Corp	2883-TW	Financials	6099	0
03/28/2012	Guangzhou Pharmaceutical Co Ltd	600332-SH	Healthcare	2834	1
03/08/2012	Ningbo Construction Co Ltd	601789-SH	Industrials	1541	0
03/06/2012	Wintime Energy Co Ltd	600157-SH	Materials	1222	1
02/29/2012	Chengtun Mining Group Co Ltd	600711-SH	Materials	5051	0
02/27/2012	Guangdong Oriental Brothers	600988-SH	Industrials	3711	0
02/15/2012	Heilongjiang Interchina	600187-SH	Energy and Power	4941	1
02/10/2012	China Resources Sanjiu Medical	000999-SZ	Healthcare	2834	1
02/10/2012	Hebei Veyong Bio-chemical Co	600803-SH	Materials	2879	0
01/30/2012	Anhui Leimingkehua Co Ltd	600985-SH	Materials	2892	1
11/08/2011	ASE Group	2311-TW	High Technology	3674	1
10/21/2011	China Vision Media Group Ltd	1060-HK	Media and Entertainment	7812	1
10/19/2011	China Resources Gas Group Ltd	1193-HK	Energy and Power	4924	1
10/14/2011	Wuhan Linuo Solar Energy Grp	600885-SH	Industrials	3433	0

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10/04/2011	WPG Holdings Co Ltd	3702-TW	High Technology	5065	1
09/06/2011	Huadian Power International	600027-SH	Energy and Power	4911	0
09/05/2011	Sichuan Guang'an AAA Public Co	600979-SH	Energy and Power	4931	0
08/19/2011	Shanghai Pharmaceutical Hldg Co Ltd	601607-SH	Healthcare	2834	1
07/01/2011	Wenfeng Great World Chain Development Corp	601010-SH	Retail	5311	0
05/18/2011	Shandong Mining Mach Group Co	002526-SZ	Industrials	3532	0
05/17/2011	Keda Industrial Co Ltd	600499-SH	Industrials	3559	1
04/01/2011	Yunnan Chihong Zinc	600497-SH	Materials	7375	1
03/22/2011	Inventec Corp	2356-TW	High Technology	1031	0
03/16/2011	MediaTek Inc	2454-TW	High Technology	3674	1
03/08/2011	Qinghai Salt Lake Ind Grp Co	000792-SZ	Materials	2819	0
02/11/2011	Agricultural Bank of China Ltd	601288-SH	Financials	6000	0
01/20/2011	Fosun International Ltd	0656-HK	Financials	6799	0
01/18/2011	Huaxin Cement Co Ltd	600801-SH	Materials	3241	1
01/18/2011	Evergrande Real Estate Group	3333-HK	Real Estate	6552	1
01/10/2011	Fubon Financial Holding Co Ltd	2881-TW	Financials	6331	0
12/17/2010	Delta Electronics Inc	2308-TW	High Technology	3679	1
11/19/2010	Nam Hing Holdings Ltd	0986-HK	Materials	3497	0
11/08/2010	Beijing Lanxum Tech Co Ltd	300010-SZ	High Technology	7372	0
11/07/2010	Lumena Resources Corp	0067-HK	Materials	1474	0
11/05/2010	Shandong Gold Mining Co Ltd	600547-SH	Materials	1041	1

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11/04/2010	Shanghai Friendship Grp Inc Co	600827-SH	Retail	5311	1
09/24/2010	China Soft International Ltd	0354-HK	High Technology	7372	1
09/01/2010	Ping An Insurance (Group)Co	601318-SH	Financials	6311	0
08/12/2010	Li & Fung Ltd	0494-HK	Consumer Products and Services	5099	1
08/10/2010	ICBC	601398-SH	Financials	6000	1
07/26/2010	Capital Securities Corp	6005-TW	Financials	6211	1
06/14/2010	Neo Telemedia Ltd	8167-HK	Telecommunications	4899	0
06/07/2010	Swire Pacific Ltd	0019-HK	Financials	6799	0
05/28/2010	Epistar Corp	2448-TW	High Technology	3674	1
05/25/2010	International Elite Ltd	1328-HK	Telecommunications	4813	0
05/13/2010	North Mining Shares Co Ltd	433-HK	Materials	1011	1
05/05/2010	Weida Medical Applied Tech Co	000603-SZ	Consumer Staples	5182	0
04/19/2010	Wheelock & Co Ltd	0020-HK	Real Estate	6798	1
03/26/2010	Fangda Special Steel Tech Co	600507-SH	Industrials	3714	0
03/20/2010	WPG Holdings Co Ltd	3702-TW	High Technology	5065	1
02/24/2010	Jinan Iron & Steel Co Ltd	600022-SH	Materials	3321	1
01/26/2010	China Gas Holdings Ltd	0384-HK	Energy and Power	4924	1
01/13/2010	Shanghai East-China Computer	600850-SH	High Technology	7373	1
12/18/2009	Tong Yang Industry Co Ltd	1319-TW	Industrials	3714	1
11/30/2009	Qingdao Haier Co Ltd	600690-SH	Industrials	3585	0
11/14/2009	Innolux Display Corp	3481-TW	High Technology	3679	1
10/30/2009	Delta Electronics Inc	2308-TW	High Technology	3679	1
10/15/2009	Shanghai Pharmaceutical Co Ltd	601607-SH	Healthcare	2834	1

10/14/2009	Zhang Jia Jie Tourism Development Co	000430-SZ	Real Estate	6552	0
10/09/2009	Chongqing Huapont Pharmaceutical Co Ltd	002004-SZ	Healthcare	2834	0
10/05/2009	Innolux Display Corp	3481-TW	High Technology	3679	1
10/01/2009	RBI Holdings Ltd	0566-HK	Consumer Products and Services	3942	0
09/29/2009	China Overseas Land & Invest	0688-HK	Real Estate	6552	1
09/18/2009	Haitong Food Group Co Ltd	600537-SH	Consumer Staples	2037	0
09/18/2009	Hubei Triring Co Ltd	000883-SZ	Industrials	3714	0
09/14/2009	Capital Securities Corp	6005-TW	Financials	6211	1
08/21/2009	Shandong Jinling Mining Co	000655-SZ	Materials	1011	1
06/04/2009	Chong Qing Dong Yuan	000656-SZ	Real Estate	6552	1
05/22/2009	China Insurance International Hldg Co Ltd	0966-HK	Financials	6311	1
05/13/2009	Datang International Power Generation	601991-SH	Energy and Power	4911	0
05/11/2009	Zhejiang Hongda Warp Knitting	002144-SZ	Consumer Staples	2258	0
04/29/2009	Wuzhou Minovo Co Ltd	600873-SH	High Technology	3679	0
02/16/2009	CNPC (Hong Kong) Ltd	0135-HK	Energy and Power	1311	0
01/15/2009	Kai Yuan Holdings Ltd	1215-HK	Energy and Power	4961	0
12/28/2008	Tangshan Iron & Steel Co Ltd	000709-SZ	Materials	3399	1
12/12/2008	GD Power Development Co Ltd	600795-SH	Energy and Power	4911	1
12/09/2008	Xinhu Zhongbao Co Ltd	600208-SH	Real Estate	6552	1
11/24/2008	Jiangsu Shenlong Hi-Tech Group Co Ltd	600401-SH	Materials	2821	0



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11/21/2008	Far Eastern Textile Ltd	1402-TW	Materials	2824	1
10/20/2008	Fosun International Ltd	0656-HK	Financials	6799	0
10/08/2008	Sany Heavy Industry Co Ltd	600031-SH	Industrials	3531	1
09/18/2008	Chung Hung Steel Co Ltd	2014-TW	Materials	3325	1
09/01/2008	WPG Holdings Co Ltd	3702-TW	High Technology	5065	0
08/28/2008	Henderson Land Development Co Ltd	0012-HK	Real Estate	6552	1
08/04/2008	Tongling Nonferrous Metals	000630-SZ	Materials	3366	0
07/29/2008	Shanghai Aerospace Automobile	600151-SH	Telecommunications	3663	0
07/28/2008	Shen Huo Co	000933-SZ	Materials	1221	0
06/05/2008	HK Health Check & Lab Hldg Co	0397-HK	Healthcare	8071	0
06/02/2008	China Merchants Bank Co Ltd	600036-SH	Financials	6000	1
05/25/2008	China Unicom Ltd	0762-HK	Telecommunications	4813	1
05/15/2008	Panzhihua New Steel	000629-SZ	Materials	3312	1
03/07/2008	Zhongjin Gold Corp Ltd	600489-SH	Materials	1041	0
03/03/2008	HKC(Holdings)Ltd	0190-HK	Real Estate	6552	0
02/28/2008	Belle International Holdings Ltd	1880-HK	Consumer Staples	3144	1
12/29/2007	Guangxi Guiguan Elec Power Co	600236-SH	Energy and Power	4911	1
12/27/2007	ICBC	601398-SH	Financials	6000	1
10/26/2007	Kenfair International (Hlds) Ltd	0223-HK	Media and Entertainment	7389	0
09/28/2007	Fu Ji Food & Catering Services Hlds Ltd	1175-HK	Retail	5812	1

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09/14/2007	Regent Pacific Group Ltd	0575-HK	Materials	1021	0
09/10/2007	Kiu Hung International Hldgs Ltd	0381-HK	Consumer Products and Services	3942	0
09/04/2007	ASE Group	2311-TW	High Technology	3674	1
09/03/2007	Titan Petrochemicals Group Ltd	1192-HK	Industrials	4789	0
08/09/2007	Suning Universal Co Ltd	000718-SZ	Real Estate	6552	1
07/11/2007	Guangdong Well Med Sci & Tech Co Ltd	002016-SZ	Healthcare	2836	0
06/14/2007	TCC International Holdings Ltd	1136-HK	Materials	3241	1
05/16/2007	Dongfang Electrical Mach Co	600875-SH	Energy and Power	3621	0
05/02/2007	China Velocity Group Ltd	0149-HK	Real Estate	6531	0
04/17/2007	Parkson Retail Group Ltd	3368-HK	Retail	5999	0
04/10/2007	USI Holdings Ltd	0369-HK	Real Estate	6799	0
03/11/2007	China Mining Resources Grp Ltd	0340-HK	Materials	1099	1
03/09/2007	Tom Group Ltd	2383-HK	Financials	6799	0
02/05/2007	Dongfang Electrical Mach Co	600875-SH	Energy and Power	3621	0
01/24/2007	Wuhan Kaidi Electric Power Co Ltd	000939-SZ	Energy and Power	4911	0
01/15/2007	Liulu Industrial Co Ltd	000686-SZ	Energy and Power	1311	0
01/02/2007	China Soft International Ltd	0354-HK	High Technology	7372	0
12/28/2006	ASE Group	2311-TW	High Technology	3674	0
11/21/2006	Epistar Corp	2448-TW	High Technology	3674	1
11/14/2006	Convenience Retail Asia Ltd	0831-HK	Retail	5399	0

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11/08/2006	Test Rite International Co Ltd	2908-TW	Consumer Products and Services	5099	0
10/14/2006	Chengdu Urban Constr & Invest Co Ltd.	600109-SH	Industrials	1522	0
09/07/2006	Wintek Corp	2384-TW	High Technology	3674	1
08/31/2006	Weichai Power Co Ltd	2338-HK	Industrials	3519	0
07/28/2006	Ping An Insurance (Group) Co	601318-SH	Financials	6311	0
07/18/2006	GOME Electrical Appl Hldg Ltd	493-HK	Retail	5722	1
06/21/2006	Hunan Nonferrous Metals Corp	2626-HK	Materials	3339	0
06/20/2006	Hon Hai Precision Industry Co	2317-TW	High Technology	3678	0
06/06/2006	SIPG	600018-SH	Industrials	4491	1
06/05/2006	Cathay Pacific Airways Ltd	0293-HK	Industrials	4512	1
05/10/2006	China Resources Logic Ltd	1193-HK	High Technology	3674	1
04/07/2006	AU Optronics Corp	2409-TW	High Technology	3679	1
02/15/2006	China Petroleum & Chemical Corp	600028-SH	Energy and Power	2911	0
10/25/2005	Fuhwa Financial Holdings Co	2885-TW	High Technology	6211	0
10/05/2005	Asustek Computer Inc	2357-TW	Telecommunications	3577	0
10/04/2005	China Mobile (Hong Kong) Ltd	0941-HK	Financials	4813	0
08/15/2005	Epistar Corp	2448-TW	High Technology	3674	1
07/01/2005	Cathay Financial Holding Co	2882-TW	Financials	6311	0
06/30/2005	SinoPac Holdings	2890-TW	Financials	6000	0
05/17/2005	Henderson Land Development Co Ltd	0012-HK	Real Estate	6552	1
04/19/2005	Shin Kong Financial Holding Co	2888-TW	Financials	6289	0

04/14/2005	Jiangxi Ganyue Expressway Co	600269-SH	Industrials	1611	1
03/27/2005	World Peace Industrial Co Ltd	3702-TW	High Technology	5065	0
12/09/2004	Union Bank of Taiwan	2838-TW	Financials	6000	0
03/22/2004	Shin Kong Financial Holding Co	2888-TW	Financials	6289	0
11/06/2003	Hon Hai Precision Industry Co	2317-TW	High Technology	3678	0
09/08/2003	Fubon Financial Holding Co Ltd	2881-TW	Financials	6331	0
07/17/2003	Far Eas Tone Telecommunications	4904-TW	Telecommunications	4813	1
04/18/2003	Asustek Computer Inc	2357-TW	High Technology	3577	0
03/28/2003	First Financial Holding Co Ltd	2892-TW	Financials	6000	0
11/20/2012	Suzhou Gold Mantis Constr	002081-SZ	Industrials	1629	0
10/11/2012	CK Life Sciences International (Hldg) Inc	0775-HK	Consumer Products and Services	8731	0
07/25/2012	Towngas	1083-HK	Energy and Power	4922	0
04/03/2012	Zijin Mining Group Co Ltd	601899-SH	Materials	1041	1
11/30/2011	Ji lin Ji En Nickel Industry	600432-SH	Materials	2819	0
08/12/2011	HTC Corp	2498-TW	High Technology	3571	0
07/21/2011	Acer Inc	2353-TW	High Technology	3577	0
01/17/2011	Chinese Estates Holdings Ltd	0127-HK	Real Estate	6798	0
01/14/2011	Chinese Estates Holdings Ltd	0128-HK	Real Estate	6798	1
11/09/2010	Solargiga Energy Hldg Ltd	0757-HK	High Technology	3674	0
06/30/2010	Yantai Wanhua Polyurethanes Co	600309-SH	Materials	2899	1
02/25/2010	Li & Fung Ltd	0494-HK	Consumer Products and Services	5099	0
01/29/2010	AU Optronics Corp	2409-TW	High Technology	3679	1

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11/16/2009	China Intl Marine Containers	000039-SZ	Industrials	3715	0
09/29/2009	ICBC	601398-SH	Financials	6000	1
08/13/2009	Yanzhou Coal Mining Co Ltd	600188-SH	Materials	1221	1
08/12/2009	Grandtop Intl Hldg Ltd	2309-HK	Consumer Staples	2389	0
06/01/2009	Prime View International Co Ltd	8069-OT	High Technology	3679	1
05/13/2008	Hunan Nonferrous Metals Corp	2626-HK	Materials	3339	0
02/01/2008	Xinjiang Goldwind Science & Technology Co Ltd	002202-SZ	Industrials	3511	1
10/24/2007	Great Eagle Holdings Ltd	41-HK	Real Estate	6798	0
10/15/2007	Cheung Kong Infrastructure Hldgs Ltd	1038-HK	Industrials	1622	0
08/27/2007	Acer Inc	2353-TW	High Technology	3577	1
08/13/2007	Lite-On Technology Corp	2301-TW	High Technology	3575	0
08/07/2007	VST Holdings Ltd	0856-HK	High Technology	6719	0
06/26/2007	China Intl Marine Containers	000039-SZ	Industrials	3715	0
06/11/2007	Aluminum Corp of China Ltd	601600-SH	Materials	3334	0
01/29/2007	Ming Pao Enterprise Corp Ltd	0685-HK	Financial	6799	0
06/20/2006	China Petroleum & Chemical Corp	600028-SH	Energy and Power	2911	0
08/26/2005	Johnson Electric Holdings Ltd	0179-HK	Energy and Power	3621	1
07/14/2005	Guoco Group Ltd	053-HK	Financial	6799	1

## Appendix D: Deal Information

Acquirer	Value of Deal (\$ mil)	Payment Method	Target Status	Target Region	CAR (-2,2)	CAR (-1,1)
Neo Solar Power Corp	99.22	Stock	Public	Taiwan	-0.01	0.02
Aluminum Corp of China Ltd	320.46	Cash	Private	Mainland China	0.03	0.02
Hangzhou Huaxing Chuangye	50.68	Stock	Private	Mainland China	-0.10	-0.11
HL Technology Group Ltd	83.88	Other	Private	Mainland China	0.02	0.00
Baoshan Iron & Steel Co Ltd	797.45	Cash	Private	Mainland China	0.02	0.01
Shandong Gold Mining Co Ltd	78.55	Cash	Private	Mainland China	-0.03	0.00
Anhui Shengyun Mach Co Ltd	83.13	Cash and stock	Private	Mainland China	0.09	0.11
CNNC Hua Yuan Titanium Dioxide	345.96	Stock	Private	Mainland China	0.13	0.05
Walvax Biotechnology Co Ltd	83.58	Cash	Private	Mainland China	-0.06	-0.05
Lextar Electronics Corp	90.01	Stock	Public	Taiwan	0.07	0.00
Baoxin Auto Group Ltd	300.81	Other	Private	Mainland China	0.09	0.09
Chengdu B-Ray Media Co Ltd	163.04	Cash	Private	Mainland China	0.01	0.01
E Ink Holdings Inc	235.40	Cash	Private	Taiwan	0.09	0.07
Tiancheng Co Ltd of Taiyuan	338.97	Stock	Private	Mainland China	0.09	0.08
China Development Financial Hldg Corp	268.56	Cash and stock	Public	Taiwan	0.01	0.00
Sichuan Yahua Ind Grp Co Ltd	74.51	Cash	Private	Mainland China	0.00	-0.01
Tangshan Jingyuan Yufeng Electric	191.81	Stock	Private	Mainland China	0.07	0.01
MediaTek Inc	2,416.96	Cash and stock	Public	Taiwan	0.01	0.03
Wuhan Humanwell Healthcare	121.92	Cash	Private	Mainland China	0.01	0.01
Shanghai Luxin Packing	76.06	Cash	Private	Mainland China	0.00	0.00

Hangzhou Zhongheng Electric Co	65.34	Stock	Private	Mainland China	-0.05	-0.07
Xinxing Ductile Iron Pipes Co	105.93	Cash	Private	Mainland China	-0.08	-0.10
China Mehoco Corp	441.60	Cash and stock	Public	Mainland China	0.05	0.06
Science City Development Public Co	371.45	Cash and stock	Private	Mainland China	0.33	0.21
Zhejiang Daily Media Grp Co	460.79	Cash	Private	Mainland China	0.17	0.19
China Development Financial Hldg Corp	1,437.48	Cash and stock	Public	Taiwan	0.01	0.00
Guangzhou Pharmaceutical Co Ltd	928.75	Cash and stock	Public	Mainland China	0.06	0.11
Ningbo Construction Co Ltd	70.94	Cash and stock	Private	Mainland China	0.37	0.28
Wintime Energy Co Ltd	457.49	Cash	Private	Mainland China	0.07	0.07
Chengtun Mining Group Co Ltd	139.06	Stock	Private	Mainland China	0.33	0.29
Guangdong Oriental Brothers	245.13	Stock	Private	Mainland China	-0.06	-0.12
Heilongjiang Interchina	78.58	Cash	Private	Mainland China	0.07	0.07
China Resources Sanjiu Medical	95.25	Cash	Private	Mainland China	-0.02	-0.01
Hebei Veyong Bio-chemical Co	1,124.63	Cash and stock	Private	Mainland China	0.23	0.20
Anhui Leimingkehua Co Ltd	81.00	Stock	Private	Mainland China	0.02	-0.02
ASE Group	64.85	Cash	Public	Taiwan	0.04	0.06
China Vision Media Group Ltd	301.24	Stock	Private	Mainland China	-0.09	-0.06
China Resources Gas Group Ltd	94.15	Cash and stock	Public	Mainland China	0.08	0.05
Wuhan Linuo Solar Energy Grp	399.71	Other	Private	Mainland China	0.22	0.14
WPG Holdings Co Ltd	80.43	Stock	Public	Taiwan	-0.15	-0.12
Huadian Power International	104.85	Cash	Private	Mainland China	-0.01	-0.01
Sichuan Guang'an AAA Public Co	114.23	Cash	Private	Mainland China	0.00	0.03

Shanghai Pharmaceutical Hldg Co Ltd	53.86	Cash	Private	Mainland China	0.02	0.00
Wenfeng Great World Chain Development Corp	87.52	Cash	Private	Mainland China	0.03	0.05
Shandong Mining Mach Group Co	50.18	Cash	Private	Mainland China	0.07	0.03
Keda Industrial Co Ltd	61.47	Cash	Private	Mainland China	0.00	0.02
Yunnan Chihong Zinc	274.19	Cash	Private	Mainland China	0.00	0.00
Inventec Corp	188.58	Stock	Public	Taiwan	-0.14	-0.07
MediaTek Inc	598.97	Stock	Public	Taiwan	0.01	0.03
Qinghai Salt Lake Ind Grp Co	501.11	Cash	Private	Mainland China	0.01	0.00
Agricultural Bank of China Ltd	393.22	Cash	Private	Mainland China	0.04	0.01
Fosun International Ltd	318.90	Cash	Public	Mainland China	0.02	0.00
Huaxin Cement Co Ltd	55.75	Cash	Private	Mainland China	0.05	0.09
Evergrande Real Estate Group	252.19	Cash	Private	Mainland China	0.13	0.07
Fubon Financial Holding Co Ltd	195.96	Cash	Public	Hong Kong	0.04	0.03
Delta Electronics Inc	90.64	Cash	Private	Taiwan	-0.02	0.00
Nam Hing Holdings Ltd	109.31	Other	Private	Mainland China	-0.13	0.00
Beijing Lanxum Tech Co Ltd	62.37	Stock	Private	Mainland China	0.25	0.16
Lumena Resources Corp	1,466.01	Cash and stock	Private	Mainland China	-0.01	0.00
Shandong Gold Mining Co Ltd	822.53	Cash	Private	Mainland China	-0.03	0.00
Shanghai Friendship Grp Inc Co	2,402.38	Stock	Public	Mainland China	0.33	0.24
China Soft International Ltd	91.00	Other	Private	Mainland China	0.09	0.01
Ping An Insurance (Group)Co	4,312.69	Cash and stock	Public	Mainland China	0.04	0.02
Li & Fung Ltd	505.45	Cash and stock	Public	Hong Kong	0.07	0.06
ICBC	1,394.80	Cash	Public	Hong Kong	-0.01	0.00



Capital Securities Corp	428.53	Cash and stock	Public	Taiwan	0.01	-0.01
Neo Telemedia Ltd	164.28	Cash and stock	Private	Hong Kong	-0.03	-0.01
Swire Pacific Ltd	335.69	Cash	Public	Hong Kong	-0.01	-0.01
Epistar Corp	270.74	Cash and stock	Public	Taiwan	-0.11	-0.08
International Elite Ltd	257.59	Other	Private	Hong Kong	0.00	0.00
North Mining Shares Co Ltd	53.29	Cash and stock	Private	Mainland China	-0.01	0.02
Weida Medical Applied Tech Co	1,359.90	Other	Private	Mainland China	0.23	0.16
Wheelock & Co Ltd	889.24	Cash	Public	Hong Kong	-0.01	-0.02
Fangda Special Steel Tech Co	82.65	Cash	Private	Mainland China	-0.08	-0.05
WPG Holdings Co Ltd	588.52	Stock Stock	Public	Taiwan	-0.15	-0.12
Jinan Iron & Steel Co Ltd	1,200.86	Cash and stock	Public	Mainland China	0.04	0.07
China Gas Holdings Ltd	129.33	Cash and stock	Public	Hong Kong	-0.16	-0.18
Shanghai East-China Computer	484.96	Stock	Private	Mainland China	0.37	0.23
Tong Yang Industry Co Ltd	115.71	Stock	Public	Taiwan	0.01	-0.01
Qingdao Haier Co Ltd	250.45	Cash	Public	Hong Kong	0.12	0.15
Innolux Display Corp	5,139.46	Stock	Public	Taiwan	0.00	0.02
Delta Electronics Inc	335.39	Stock	Public	Taiwan	-0.02	0.00
Shanghai Pharmaceutical Co Ltd	1,425.96	Cash and stock	Public	Mainland China	0.02	0.00
Zhang Jia Jie Tourism Development Co	158.99	Stock	Private	Mainland China	0.18	0.13
Chongqing Huapont Pharmaceutical Co	223.62	Stock	Private	Mainland China	0.18	0.10
Innolux Display Corp	839.99	Stock	Public	Taiwan	0.00	0.02
RBI Holdings Ltd	533.12	Other	Private	Hong Kong	0.23	-0.03
China Overseas Land & Invest	246.91	Cash	Public	Hong Kong	0.03	-0.01

Haitong Food Group Co Ltd	1,062.23	Other	Private	Mainland China	0.32	0.20
Hubei Triring Co Ltd	2,464.65	Other	Private	Mainland China	0.33	0.21
Capital Securities Corp	134.33	Stock	Private	Taiwan	0.01	-0.01
Shandong Jinling Mining Co	60.31	Cash	Private	Mainland China	-0.06	0.06
Chong Qing Dong Yuan	1,995.57	Stock	Private	Mainland China	0.08	0.09
China Insurance International Hldg Co Ltd	470.11	Stock	Public	Hong Kong	0.17	0.06
Datang International Power Generation	197.09	Cash	Private	Mainland China	0.00	0.03
Zhejiang Hongda Warp Knitting	55.10	Stock	Private	Mainland China	0.24	0.21
Wuzhou Minovo Co Ltd	977.26	Stock	Private	Mainland China	0.25	0.17
CNPC (Hong Kong) Ltd	63.83	Cash	Private	Mainland China	0.08	0.00
Kai Yuan Holdings Ltd	59.80	Stock	Private	Hong Kong	0.17	0.02
Tangshan Iron & Steel Co Ltd	1,688.60	Cash and stock	Public	Mainland China	0.02	0.01
GD Power Development Co Ltd	185.06	Cash	Private	Mainland China	0.04	0.03
Xinhu Zhongbao Co Ltd	315.00	Cash	Public	Mainland China	0.31	0.20
Jiangsu Shenlong Hi-Tech Group Co Ltd	168.33	Stock	Private	Mainland China	0.13	0.08
Far Eastern Textile Ltd	95.27	Cash	Private	Taiwan	0.01	0.02
Fosun International Ltd	81.59	Cash	Public	Mainland China	0.02	0.00
Sany Heavy Industry Co Ltd	281.91	Stock	Private	Mainland China	0.00	-0.05
Chung Hung Steel Co Ltd	139.85	Cash	Private	Taiwan	-0.03	0.02
WPG Holdings Co Ltd	127.30	Stock	Public	Taiwan	-0.15	-0.12
Henderson Land Development Co Ltd	181.93	Cash	Private	Hong Kong	0.01	-0.01

Tongling Nonferrous Metals	53.28	Cash	Private	Mainland China	-0.06	-0.08
Shanghai Aerospace Automobile	146.47	Cash	Private	Mainland China	0.06	0.04
Shen Huo Co	84.61	Cash	Private	Mainland China	0.00	0.02
HK Health Check & Lab Hldg Co	113.05	Stock	Public	Hong Kong	0.02	0.04
China Merchants Bank Co Ltd	4,555.25	Cash	Public	Hong Kong	-0.02	-0.02
China Unicom Ltd	25,416.14	Cash and stock	Private	Mainland China	0.02	0.01
Panzhihua New Steel	961.73	Stock	Public	Mainland China	0.13	-0.03
Zhongjin Gold Corp Ltd	126.76	Cash	Private	Mainland China	-0.05	-0.03
HKC (Holdings) Ltd	51.13	Cash	Public	Hong Kong	0.00	-0.03
Belle International Holdings Ltd	191.05	Cash	Public	Hong Kong	-0.09	-0.08
Guangxi Guiguan Electric Power Co	510.86	Cash and stock	Private	Mainland China	0.02	0.03
ICBC	246.63	Cash	Public	Hong Kong	-0.01	0.00
Kenfair International (Hldgs) Ltd	100.72	Other	Private	Hong Kong	-0.28	-0.15
Fu Ji Food & Catering Services Hldgs Ltd	69.46	Cash	Private	Hong Kong	0.00	0.00
Regent Pacific Group Ltd	179.77	Stock	Private	Hong Kong	0.00	0.01
Kiu Hung International Hldgs Ltd	107.97	Cash	Private	Mainland China	-0.13	-0.15
ASE Group	1,314.06	Cash	Public	Taiwan	0.04	0.06
Titan Petrochemicals Group Ltd	170.00	Other	Private	Mainland China	0.13	0.22
Suning Universal Co Ltd	294.81	Stock	Private	Mainland China	0.39	0.27
Guangdong Well Med Sci & Tech Co Ltd	240.59	Stock	Private	Mainland China	0.25	0.28
TCC International Holdings Ltd	322.46	Stock	Public	Hong Kong	0.16	0.19

Dongfang Electrical Mach Co	1,457.23	Cash	Public	Mainland China	0.16	0.13
China Velocity Group Ltd	115.06	Other	Private	Mainland China	0.09	0.09
Parkson Retail Group Ltd	66.08	Cash	Private	Mainland China	0.05	-0.04
USI Holdings Ltd	266.75	Stock	Public	Hong Kong	0.00	-0.01
China Mining Resources Grp Ltd	233.76	Cash	Private	Mainland China	0.06	0.08
Tom Group Ltd	402.17	Cash	Public	Hong Kong	0.02	0.03
Dongfang Electrical Mach Co	2,835.80	Cash and stock	Public	Mainland China	0.16	0.13
Wuhan Kaidi Electric Power Co Ltd	134.00	Stock	Private	Mainland China	0.06	0.03
Liulu Industrial Co Ltd	369.31	Stock	Private	Mainland China	0.00	0.00
China Soft International Ltd	112.82	Other	Private	Hong Kong	0.09	0.01
ASE Group	60.00	Cash	Private	Mainland China	0.04	0.06
Epistar Corp	383.99	Stock	Public	Taiwan	-0.11	-0.08
Convenience Retail Asia Ltd	81.17	Cash	Public	Hong Kong	-0.03	-0.01
Test Rite International Co Ltd	66.30	Cash	Public	Taiwan	0.00	-0.01
Chengdu Urban Constr & Invest Co Ltd.	92.50	Other	Private	Mainland China	-0.02	-0.08
Wintek Corp	185.46	Cash	Public	Taiwan	0.00	0.00
Weichai Power Co Ltd	467.73	Cash and stock	Public	Mainland China	0.05	-0.01
Ping An Insurance (Group) Co	616.78	Cash	Private	Mainland China	0.04	0.02
GOME Electrical Appl Hldg Ltd	678.12	Cash and stock	Public	Hong Kong	-0.01	0.00
Hunan Nonferrous Metals Corp	62.57	Other	Private	Mainland China	0.01	0.00
Hon Hai Precision Industry Co	928.12	Stock	Public	Taiwan	-0.02	-0.05
SIPG	1,109.60	Cash	Public	Mainland China	0.24	0.27
Cathay Pacific Airways Ltd	1,020.08	Cash and stock	Private	Hong Kong	-0.02	-0.02

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China Resources Logic Ltd	107.86	Cash and stock	Public	Hong Kong	0.08	0.05
AU Optronics Corp	2,173.64	Stock	Public	Taiwan	0.01	0.00
China Petroleum & Chemical Corp	606.18	Cash	Public	Mainland China	0.03	0.04
Fuhwa Financial Holdings Co	2,296.86	Stock	Private	Taiwan	0.02	0.00
Asustek Computer Inc	196.48	Other	Private	Hong Kong	0.06	0.05
China Mobile (Hong Kong) Ltd	465.62	Stock	Public	Taiwan	-0.01	-0.04
Epistar Corp	151.94	Cash	Public	Hong Kong	-0.11	-0.08
Cathay Financial Holding Co	78.32	Stock	Public	Taiwan	-0.06	-0.02
SinoPac Holdings	1,547.94	Cash	Private	Taiwan	-0.03	-0.03
Henderson Land Development Co Ltd	177.49	Stock	Public	Taiwan	0.01	-0.01
Shin Kong Financial Holding Co	569.25	Cash	Public	Hong Kong	-0.02	-0.06
Jiangxi Ganyue Expressway Co	87.92	Stock	Private	Taiwan	0.07	0.05
World Peace Industrial Co Ltd	174.23	Cash	Private	Mainland China	-0.15	-0.12
Union Bank of Taiwan	221.57	Cash	Private	Taiwan	0.04	0.04
Shin Kong Financial Holding Co	159.70	Stock	Private	Taiwan	-0.02	-0.06
Hon Hai Precision Industry Co	1,077.46	Stock	Public	Taiwan	-0.02	-0.05
Fubon Financial Holding Co Ltd	415.36	Cash	Public	Hong Kong	0.04	0.03
Far Eas Tone Telecommunicatio	880.31	Cash and stock	Private	Taiwan	0.05	0.03
Asustek Computer Inc	100.69	Cash	Private	Taiwan	0.06	0.05
First Financial Holding Co Ltd	105.92	Stock	Public	Taiwan	0.02	0.02
Suzhou Gold Mantis Constr	75.00	Cash	Private	United States	-0.01	0.01
CK Life Sciences International (Hldg) Inc	76.94	Cash	Private	Australia	-0.02	0.01

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Towngas	170.00	Cash	Private	Thailand	-0.02	-0.03
Zijin Mining Group Co Ltd	196.70	Cash	Public	Australia	-0.04	-0.02
Ji lin Ji En Nickel Industry	85.58	Cash	Public	Canada	-0.04	-0.03
HTC Corp	309.00	Cash	Private	United States	-0.09	-0.09
Acer Inc	395.00	Other	Private	United States	-0.07	-0.07
Chinese Estates Holdings Ltd	443.68	Cash	Private	United Kingdom	-0.03	-0.03
Chinese Estates Holdings Ltd	128.62	Other	Private	Isle of Man	-0.02	0.00
Solargiga Energy Hldg Ltd	107.77	Other	Private	British Virgin	0.09	0.07
Yantai Wanhua Polyurethanes Co	1,700.54	Cash	Private	Hungary	-0.15	-0.10
Li & Fung Ltd	263.64	Cash	Private	United Kingdom	0.02	0.00
AU Optronics Corp	166.31	Cash	Private	Japan	-0.01	-0.09
China Intl Marine Containers	253.06	Cash	Public	Singapore	0.06	0.03
ICBC	539.12	Cash	Public	Thailand	-0.02	-0.01
Yanzhou Coal Mining Co Ltd	2,806.88	Cash	Public	Australia	-0.01	0.04
Grandtop Intl Hldg Ltd	94.27	Cash	Public	United Kingdom	0.08	0.05
Prime View International Co Ltd	400.34	Other	Private	United States	0.11	0.10
Hunan Nonferrous Metals Corp	62.24	Cash	Public	Australia	-0.03	-0.02
Xinjiang Goldwind Science & Technology Co Ltd	60.91	Cash	Private	Germany	0.01	0.01
Great Eagle Holdings Ltd	170.00	Cash	Private	United States	0.06	-0.03
Cheung Kong Infrastructure Hldgs Ltd	645.48	Cash	Public	Canada	-0.04	-0.03
Acer Inc	716.77	Cash	Public	United States	-0.07	-0.07

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Lite-On Technology Corp	374.78	Cash	Public	Finland	-0.03	-0.03
VST Holdings Ltd	84.51	Cash	Public	Singapore	-0.05	-0.03
China International Marine Containers	148.50	Cash	Private	Netherlands	0.06	0.03
Aluminum Corp of China Ltd	770.79	Cash	Public	Canada	-0.03	0.04
Ming Pao Enterprise Corp Ltd	280.37	Stock	Public	Malaysia	0.09	0.16
China Petroleum & Chemical Corp	3,501.00	Cash	Public	Russian Fed	0.03	0.01
Johnson Electric Holdings Ltd	549.26	Cash	Public	Switzerland	0.00	0.02
Guoco Group Ltd	514.10	Cash	Public	Singapore	-0.01	-0.01