



**MERGERS AND ACQUISITIONS ISSUES IN A
TRANSITIONAL MARKET: EVIDENCE FROM
CHINA**

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Declaration

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Abbreviations

AAR	Average Abnormal Returns
AR	Abnormal Returns
BHAR	Buy-and-hold Abnormal Returns
BTMV	Book-to-Market Value
CAAR	Cumulative Average Abnormal Returns
CAR	Cumulative Abnormal Returns
CCP	Chinese Community Party
CEO	Chief Executive Officer
CFA	Chartered Financial Analysts Institute
CNY	Chinese Yuan
CRS	Contract Responsibility System
CSMAR	China Securities Market and Accounting Research
CSRC	China Securities Regulatory Commission
CTPR	Calendar Time Portfolio Returns
ICAEW	Institute of Chartered Accountants of England and Wales
IIF	Institute of International Finance
IMF	International Monetary Fund
M&A	Mergers and Acquisitions
OECD	Organisation for Economic Co-operation and Development
PRC	Peoples' Republic of China
SEOs	Seasoned Equity Offerings
SOEs	State-owned Enterprises
WTO	World Trade Organisation

Abstract

Mergers and acquisitions and corporate governance are two extensively researched areas in finance. However, these areas have been studied separately and carried out mainly in developed and mature markets. Therefore, there is limited evidence on the link between mergers and acquisitions transactions and corporate governance mechanisms. Specifically, empirical evidence based on Chinese settings is comparatively limited. This study integrates and examines mergers and acquisitions incidences and, corporate governance mechanisms using a unique dataset from China.

The study uses a unique dataset of Chinese firms involved in merger and acquisition activities between 2002 and 2011. The short-term daily abnormal returns are calculated using cumulative abnormal returns. Given the controversies surrounding long-term returns computation, two alternative methods are used, the buy-and-hold abnormal returns and calendar-time-portfolio returns to calculate bidder returns. Instrumental variables estimation method is used to investigate the relation between bidder returns and corporate governance.

In the short-term, this study's findings suggest that stock prices react instantaneously to 'new' information as investors perceive higher potential synergetic gains from the consolidation of fragmented firms. Analysis of the factors driving the price changes shows that state and legal-person ownership are associated with low returns. Adding independent directors on corporate boards does not necessarily improve management monitoring. Interestingly, combining the role of CEO and chairperson is associated with high bidder returns due to the socio-political life of Chinese which is consistent with stewardship theory. In the long-term, the short-term gains are reversed based on actual performance of the resultant firm two years after acquisition. Analysis of the factors driving the price differences shows that ownership structure and independent directors are associated with low bidder returns.

The study highlights the need for the state to play a supportive role that helps the market to run on its own and formulate sound corporate governance policies that not only involves compliance but promotes a culture and climate of consistency, responsibility, accountability, fairness, transparency and effectiveness. It also highlights that where the state doubles up as player and regulator, M&A activity may be driven by political and social rather than be economically motivated.

Chapter 1 Introduction

1.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. Following the introduction of economic reforms in 1978, China has witnessed rapid and steady economic growth. This inevitably resulted in the rationalisation and the need for resources including the corporate capital. After the establishment of the Shanghai and Shenzhen Stock Exchanges in the early, 1990s, the Chinese government encouraged M&A to reduce the national debt burden of state-owned enterprises (SOEs) and to open traditionally restricted industries, making them more competitive. Despite the late development of M&A activity, M&A have been and continue growing at phenomenal rates since its introduction in 1993. Per the CSMAR database, from the year 2001 to 2014, China's M&A activity grew by 462.20% in terms of the number of transactions and 116.30% in terms of the value of the transactions. As the world's second largest economy celebrates an unprecedented growth in M&A activity, it is important to find out whether M&A create or destroy value for the shareholders. Recent studies document value-creation for the bidding firm's shareholder around announcement date (Chi, Sun, & Young, 2011; L. Huang, 2010b; S. Li, Feng, & Cao, 2011; Z. Ning, 2009; Shen, 2008). However, the picture is not so clear for long-term studies. Boateng and Bi (2013), Chi et al. (2011) and Zhou, Guo, Hua, and Doukas (2012) document value-creation post-acquisition. A more recent study by E. L. Black, Doukas, Xing, and Guo (2013) report value-destroying post-acquisitions. Whether shareholders obtain wealth gains from firms engaging in M&A activity in China, is a question that needs some answers.

While M&A take place for economic reasons that intend to increase shareholder wealth, practically many reduce shareholder wealth (King, Dalton, Daily, & Covin, 2004; Tuch & O'Sullivan, 2007). One explanation is that ineffective corporate governance mechanisms to monitor and control managerial behaviour, result in managers engaging in wealth reducing M&A. In concert with this explanation, the Chinese government introduced the Code of Corporate Governance (2001) in line with international best governance practice. This has strengthened investor confidence and reinforced the economic sustainability of Chinese enterprises. Despite accolades from the World Bank and International Monetary Fund, serious problems still exist in various aspects of Chinese institutions and practices (Y.

Huang et al., 2005). A study conducted by the Canada's Centre for International Governance Innovation in 2006 rate China first out of ten Asian economies in adopting the OECD governance principles (Liang & Useem, 2009). However, the study rated China ninth of ten on the actual governance practices. Ownership of listed firms is still overwhelmingly dominated by state ownership. This problem evolved from the planned economy principles and is set to improve because of the on-going share reform. Another problem is the immaturity of the market economy, including the absence of corporate debt market. This problem may remain unchanged for the foreseeable future. As the impact of these reforms continues, it is of paramount importance to understand the impact of corporate governance on shareholder value in a Chinese setting.

Though some studies on China exist (Chi et al., 2011; Pukthuanthong-Le & Visaltanachoti, 2009b) none of them has studied the effect of corporate governance on both short-term and long-term abnormal returns. In this study, we use corporate governance variables unique to China; state ownership and legal person ownership and board structure variables derived from prior studies from other countries; board size, independent directors and CEO role duality. The present study fills a gap in the literature by examining how corporate governance and M&A activity are intertwined in a Chinese setting.

This chapter is organised as follows. Section 1.2 presents the general research context, exploring the latest evolution in the two fields of study: M&A and corporate governance. In section 1.3 the main points of research are described, justifying the choice of China as a case study, and introduces the rationale and study objectives. Critical issues of this study are also highlighted and the expected contributions to the advancement of knowledge in the fields of study are identified. The chapter ends with an outline of the thesis.

1.2 General research context

As this study is carried out in the M&A context, it is worth presenting a few updates on this phenomenon. First, recent data on M&A frequency and extent is provided. Motives behind M&A and their success rates then follow. Second, the latest developments in corporate governance are provided, highlighting the aspects that provide for so much controversy.

1.2.1 Mergers and acquisitions

M&A have become an important socio-economic phenomenon and a dominant growth strategy for many corporations around the world. The number of deals and the value of transactions involved are striking, year after year. A review of the M&A trends over the period between 1995 and 2014 shows that the number of deals increased by 277% while the value increased 108%¹ (see Figure 2.1). Interestingly, the highest number and value of M&A transactions were recorded in 2007. More than 47,800 deals were announced worldwide with a value of US\$4.9 trillion in that year. This was driven by increased globalisation, the opening of once-closed economies, easy accessibility of financial resources on the world markets and development of creative financial instruments such as securitization. The year that followed, 2008 witnessed one of the worst economic downturns since the Great Depression of 1929-39 because of the subprime crisis and the ensuing credit crunch that hit the world economy but M&A activity only decreased by 4%.

In cases where the markets are efficient and managers act rationally, M&A should create value for the shareholders. Many explanations have accumulated as to why M&A should have a positive return to the managers. The explanation that commands support among researchers is the synergy motive because of its consistency with the efficient market hypothesis and value maximising behaviour of managers. Synergetic gains are realised through improved operational efficiency, increased market power and more efficient use of human capital. Conversely, in cases where the markets are not efficient and managers act irrationally, M&A destroy value. The explanation for negative returns is based on two foundations. Managers may acquire other firms because of miscalculation through overconfidence resulting in an overpayment (Roll, 1986; Y. Wang & Hickson, 2009; Weitzel & McCarthy, 2011). Or, the bidder firm managers may fail to recognise the potential economic gains from an acquisition because personal motives dominate their preferences (R. D. Campbell, Ghosh, Petrova, & Sirmans, 2011). In this regard, M&A tend to intensify the already existing conflict of interest between managers and shareholders in modern firms. Whether shareholders obtain wealth gains from firms engaging in M&A is a question that needs some answers.

¹ This data was sourced from the Institute for Mergers, Acquisitions and Alliances (IMAA) database, 2016.

Prior research on whether M&A create or destroy value can generally be divided into two different broad approaches. First, there is a strand of literature that examines the stock market reaction around M&A announcements. Evidence from this strand of literature suggests that the combined return for the bidder and target firms is positive, lending support to the widely-held view that M&A create value and therefore are economically efficient. There is also consensus from the previous studies that target firm shareholders earn positive and significant returns. The average return for bidder firm shareholders is, however, less clear; some studies find negligible positive returns, others small losses and at best break-even (Sudarsanam & Mahate, 2006). Fuller, Netter, and Stegemoller (2002), associate positive returns to the resulting combination with the transfer of wealth from bidders to targets. Second, there is a strand of literature that examines the stock market reaction following M&A announcement (post-acquisition). Evidence from this literature strand is mixed but suggests stock performance is very sensitive to the methodology used (Dutta & Jog, 2009; Lyon, Barber, & Tsai, 1999).

Interestingly, the United States (US) and the United Kingdom (UK) which have developed and mature capital markets, have been the sites of most of these studies (A. Wang & Cheung, 2009). These economies are characterised by strong-form market efficiency where share prices incorporate all information public or private, high per capita income, advanced industrialisation and well-established legal systems. China is characterised by middle per capita income, high economic growth rates, volatility due to social and economic changes undertaken to shift from command economy to market economy and poor legal environment that offer little investor protection. Another interesting characteristic of Chinese M&A activity is that it is driven by state policy rather than by firm-level strategy.

It seems reasonable to ask the question whether these findings apply to economies such as China. Consequently, this study analyses the impact of shareholders' wealth for bidder firms from China, the fastest growing and second largest economy, and the largest market in the whole wide world. Also, the mixed and inconclusive results on bidder firm returns offer an opportunity to carry out further research in this area.

1.2.2 Corporate governance

While M&A take place for economic reasons that intend to increase shareholder wealth, practically many reduce shareholder wealth (King, Dalton, Daily, & Covin, 2004; Tuch &

O'Sullivan, 2007). One explanation is that ineffective corporate governance mechanisms to monitor and control managerial behaviour result in managers engaging in wealth reducing M&A. The 21st-century firm represents a complex organisation that involves managing complex interlocking relationships with its stakeholders (Swanstrom, 2006). One relationship that is of paramount importance for a listed firm is that between shareholders and management. This relationship is dominated by an inherent conflict of interest characterised by a potential misalignment of interests where managers may pursue self-interests instead of shareholder value maximisation (Jensen & Meckling, 1976). A firm can use monitoring and bonding mechanisms embedded in a good governance structure to ameliorate total agency costs of a firm.

One way of reducing agency costs is for the shareholders to appoint a board of directors to oversee activities of management. The board of directors has a fiduciary responsibility to represent shareholders by monitoring management (agency theory) and providing resources by offering advice to management (resource dependency theory) (Swanstrom, 2006). They can hire and fire management, design executive compensation contracts, and approve major firm decisions. However, recent corporate failure cases such as Enron and WorldCom indicate that boards have failed in their responsibilities. These events have stirred calls for board structure reform especially relating to independence and CEO influence. In the US, this resulted in the enactment of the Sarbanes-Oxley Act (2002) calling for more independent directors on boards while in the UK, this has resulted in the Code of Practice being reviewed every two years to keep it abreast with developments in the business environment. The influence of board structure and composition on specific decisions such as acquisitions is an important field of study that has attracted much attention but research findings have not been conclusive.

Another way of reducing agency costs is for the shareholders to offer incentives to managers such as managerial ownership to align their interests with those of the shareholders. Evidence from the literature suggests that increasing managerial ownership results in improved firm performance up to a certain level of ownership, beyond which it worsens firm performance (Jensen & Meckling, 1976). The non-monotonic relation between the size of inside ownership and firm performance is a puzzle that has motivated much research with no conclusive findings (Agrawal & Knoeber, 2012).

Also, the existence of block holders and institutional investors is regarded as an effective managerial monitoring mechanism (Ben-Amar & Andre, 2006). Their large shareholding and divestment barriers, as well as the availability of expertise and resources at their disposal, provide them with a greater incentive to monitor management. However, like inside ownership, concentrated shareholding can also provide an incentive to extract private benefits at the expense of minority shareholders. These contrasting arguments might explain the non-significant findings obtained by Cosh, Guest, and Hughes (2006) in their study of the influence of institutional ownership on shareholder wealth effects in UK acquisitions. In their study of the influence of institutional ownership on shareholder wealth effects in UK acquisitions.

It is in the context as described above that this study aims to investigate the influence of corporate governance on shareholder wealth performance.

1.2.3 Firm-specific and deal-specific characteristics

A number of firm-specific and deal-specific explanations have been put forward to explain why mergers fail. For example, Lang, Stulz, and Walkling (1991) document that shareholder abnormal returns are related to the q ratio of the bidders firms. Abnormal returns are lower for acquisitions by firms with low Tobin's q (Gleason, Kim, Kim, & Kim, 2012, p. 8). The choice of capital structure plays a paramount role in mitigating agency costs (Maloney, McCormick, & Mitchell, 1993; Myers & Majluf, 1984). Evidence from prior research indicates that minority shareholders' value decrease as a result of related party transactions (Cheung, Jing, Lu, Rau, & Stouraitis, 2009; Gordon, Henry, & Palia, 2004) indicating expropriation by majority shareholders. Moeller, Schlingemann, and Stulz (2004) and, more recently, Weitzel and McCarthy (2011), show that size matters, and find that larger acquirers underperform their smaller rivals.

Prior evidence also indicates that acquirer returns in publicly listed targets differ significantly from private targets (Bauguess & Stegemoller, 2008; Ben-Amar & Andre, 2006; Sudarsanam & Huang, 2007). Some studies suggest that the method of payment used in an acquisition is related to the stock market's reaction to M&A announcement (Chang, 1998; Masulis, Wang, & Xie, 2007). Fuller et al. (2002), find significance in deal values, suggesting that the bigger the deal the poorer the performance. Also, evidence from prior

research suggests that firms with previous acquisition experience tend to make superior subsequent acquisitions because of gained expertise (Kroll, Walters, & Wright, 2008).

The list of firm-specific and deal-specific characteristics currently considered by the literature is far from complete suggesting much work still needs to be done to better understand the shareholder wealth performance. This study, therefore in addition to specific characteristics, also considers the impact of corporate governance on shareholder wealth performance. This study represents one of the few studies that consider corporate governance structure as well as controlling for the firm-specific and deal-specific characteristics.

1.3 Study description

In section 1.2 above, the general context of this study was presented. In this section, the main objectives and rationale of this study are presented. First, the case for China as a case for the study is presented. Second, details of the general research design and the study rationale are provided. Third, the contributions this study aims to make to the general field of study are discussed as well as some anticipated limitations of the current study.

1.3.1 The choice of China as a case of study

Since the turn of the 21st century, the world has witnessed phenomenal growth in terms of value and number of M&A transactions. The number of transactions has increased from 31,214 in 2000 to 44,097 in 2015 and in terms of value, has increased from US\$3.62 trillion to US\$4.56 trillion over the same period². Much of this growth has come from transitional and developing countries where it plays a pivotal economic role in transitional periods. In 2015, transitional countries, Brazil, Russia, India, China and South Africa (BRICS), accounted for a substantial share of the world M&A activity. BRICS countries contributed 9,825 (22.28% of global total) transactions and US\$924 billion (20.22%) in value terms. China alone contributed 5,986 (13.57%) in volume terms US\$775 billion (16.96%) in monetary terms which are driven by government policy to consolidate fragmented industries and increase international competitiveness during the reform period.

China is a special case for an investigation of the influence of corporate governance on

² This data was sourced from the Institute for Mergers, Acquisitions and Alliances (IMAA) database, 2016.

abnormal returns due to its increasing M&A activity and unique market characteristics. Unprecedented economic growth and the promulgation of the corporate law in the early 1990s have resulted in rapid development of financial markets and phenomenal growth in M&A activities. A report by Baird R W and Company (2011) shows that from the year 2001 to 2009, China's M&A increased at the speed of 20.5% compounded annual growth rate. The report also shows that in 2010 domestic M&A deals rose by 12% over 2009, reflecting healthy economic fundamentals and a slightly larger risk appetite among bidders.

The Chinese market presents unique market characteristics to which application of conventional theories may not hold (Kakabadse, Yang, & Sanders, 2010). Ownership structure in China is highly concentrated and in other words, closely held. In 2008, of the 1,604 listed firms on Shanghai and Shenzhen Stock Exchanges, the top five shareholders controlled about 51% of the total outstanding share (N. Liang & Useem, 2009). The conflict of interest is dominantly between the controlling shareholders and minority shareholders, which often lead to expropriation of minority shareholders by means of investing corporate resources in projects that maximise majority shareholders' interests. Most of the earlier work concentrates on mature markets where there is diffused share ownership and the conflict of interest is mainly between managers and the widely dispersed and weak shareholders.

Another unique characteristic of the China's market is that state ownership dominates shareholding in listed firms. This ownership structure evolved from the planned economy principles where the state once wholly owned and controlled most of the business enterprises. Additionally, most of the senior managers come from state-owned enterprises with almost two-thirds of the directors appointed directly and indirectly by the state (N. Liang & Useem, 2009). Thus, decisions of management and board of directors represent the interests of the controlling and large shareholders who appoint them (Firth, Lin, & Wong, 2008). Accordingly, there is a very small presence of private investors with management, foreigners and employees holding less than 2% of the listed firms' outstanding shares as at the end of 2004 (Cheung et al., 2009).

The involvement of the state as both regulator and player stifles competition leading to a weak market for corporate control and board structures. Managers do not feel compelled to maximise shareholder value but maximise social welfare as their performance is assessed by the state rather than the markets (J. Song, Wang, & Cavusgil, 2015). The independence

of independent directors also becomes questionable to which Huyghebaert and Wang (2010) argue that the appointment is only a window dressing exercise to comply with the law. However, Zhou et al. (2012), note that politically connected firms get government support to acquire target firms in industries under state control. Politically connected firms may also enjoy favourable financial support provided by the four largest state-owned banks in the form of privileged bank loans and subsidies.

Chen *et al.* (2004) argue that the “institutional characteristics of China’s stock markets differ markedly from those in other countries and the research results from other nations cannot be automatically imputed to the PRC” (p. 283). This study attempts to provide an answer to calls for “... research that examines [corporate] governance and M&A performance in other regions where governance, regulatory and systematic factors may well differ significantly” (Hagendorff, Collins, & Keasey, 2007, p. 958). These unique institutional features mean that extra care is necessary and factors exclusive to China’s stock market are considered when applying event study methodology and analysing the results.

There is growing interest in the research of unique markets like China. China, with a population of more than 1 billion and an average GDP growth rate of more than 10%, presents both the largest market and the second largest economy in the world after surpassing Japan in 2010. Strong economic growth rate forecasts and a huge market have also attracted international investors in their droves especially now when the rest of the world is recording negative or low economic growth rates.

Despite the rapid growth and importance of M&A activities in the economy, there has been a dearth of literature on the M&A activity-corporate governance relationship in China. While the agency problem has been extensively researched in China, they have been very few studies relating to the manager-shareholder conflict in M&A decisions. Chinese firms’ corporate managers are also considered to possess very little experience in M&A because their economy is still in transition from planned economy adopted from the Soviet Union to the market system adopted from the Western countries. This study aims to bridge this gap by examining whether corporate managers make acquisition decisions that enhance shareholder value and the factors that influence such decisions in China.

1.3.2 Research Questions and research design

While economic gains represent a viable explanation rationale, some researchers suggest that managers engage in M&A for personal benefits (Roll, 1986). From an agency theory point of view, it is expected that managers as personal utility maximisers, sometimes serve their own interests at the expense of shareholders giving rise to agency problems. Evidence of these agency problems shows when firms engage in value-destroying acquisitions. To alleviate such problems linked to managerial opportunism, good corporate governance suggests that an effective board of directors may be one way of monitoring and controlling the actions of management. Prior research evidence suggests that the presence of an independent board may improve performance (Wright, Kroll, Lado, & van Ness, 2002). It is also documented that managerial equity ownership help aligns managers' interest with those of shareholders (Kroll et al., 2008). Since shareholders must accept the wealth effects associated with firm decisions, they are most concerned with the long-term well-being of a firm (Swanstrom, 2006). However, little research has been done so far in analysing the role of corporate governance in M&A (Cosh et al., 2006). Moreover, China's institutional set-up differs from mature and more developed markets. Ownership is highly concentrated and dominated by the state. This results in an additional agency problem between majority and minority shareholders. Thus, agency theory, in its entirety cannot be applied to China in the same way as in mature and developed markets.

This study integrates two controversial fields of studies with an emphasis on examining the effect of corporate governance on the bidder shareholders' abnormal returns both in the short term and long term. More specifically, the study considers this relation in a two-stage approach. First, we analyse bidder returns around the announcement date (short-term) and post-announcement (long-term). Second, we assess how bidder returns obtained relate to corporate governance present in bidder firms.

The analysis of bidder returns is guided by the following Research Question, both in the short-term and long-term:

Research Question 1: *Are mergers and acquisitions associated with value creation for bidder firms?*

An explanatory assessment of how corporate governance mechanisms influence bidder returns is carried out guided by the following Research Question, both in the short-term and long-term:

Research Question 2: *What are the effects of corporate governance on bidder returns?*

The research methodology starts with a search of the previous literature on M&A and corporate governance. A literature search is conducted in the fields of accounting, business and related areas focusing on M&A and corporate governance with a specific emphasis on bidder returns and corporate governance. It also includes a review of the overall institutional setting in China with an objective of gaining an understanding of the evolution and current standing of reforms therefrom. The literature is largely obtained from books and peer-reviewed published materials. This literature is critically reviewed and used to develop hypotheses and inform data collection tools to meet further objectives.

This study utilises mainly secondary data from China Securities Market and Accounting Research (CSMAR) databases of listed firms on the Shanghai and Shenzhen Stock Exchanges and incorporated in the Peoples' Republic of China. Secondary sources are preferred because they are more convenient to use as they are already condensed and organised which makes analysis and interpretation more manageable. The sample dataset for the study covers the period from 2001 to 2014 as it marks the introduction of the *Code of Corporate Governance for Listed Companies* (2001) (hereinafter referred to as the *Code*) and represents the most up to date data.

To answer the first Research Question, this study applies the most widely used event study methodology to analyse both short-term and long-term stock performance. Cumulative abnormal returns (CAR) are employed to analyse bidder returns around announcement date. To analyse long-term stock performance following the announcement, the study employs two alternative measures: the buy-and-hold abnormal returns (BHAR) and the calendar-time portfolio returns (CTPR). The choice of these approaches has been informed mainly by literature.

To answer the second Research Question, cross-sectional regression analysis is utilised to determine the magnitude of the relationship between corporate governance measures and the resulting shareholder abnormal returns. We adopt an instrumental variable (IV) approach to dealing with the potential endogeneity among the corporate governance

variables to analyse bidder returns-corporate governance relationship. Related diagnostic statistics for assessing the adequacy of IV are performed and reported.

Finally, the empirical results on bidder returns and the impact of corporate governance determinants on bidder returns will be discussed for short-term and long-term separately.

1.3.3 Research contributions

This thesis aims to advance understanding of the influence of corporate governance variables on shareholder stock performance controlling for firm and deal-specific characteristics and provide insights for researchers, practitioners and regulators.

First, this study aims to contribute to the growing body of evidence that examines the influence of corporate governance mechanisms present in bidder firms to stock performance both in the short-term and long-term in an economy with a unique institutional setting. Most of the studies in this area to date focus mainly on short-term abnormal returns. This study is one of the few studies that integrate two widely researched areas in finance but highly controversial namely, M&A, and corporate governance. Previous research mainly focused on either M&A or corporate governance as separate fields of study.

Second, this study aims to contribute to these fields of study using various methodological insights. First and foremost, this study uses a unique dataset of Chinese acquisitions. Previous research focused mainly on the mature and developed economies of the US and the UK. These studies have also demonstrated that countries vary considerably depending upon the corporate governance and ownership arrangements in each country (G. Johnson, Scholes, & Whittington, 2005). For example, most of the earlier work concentrates on mature markets where there is diffused share ownership and the conflict of interest is mainly between managers and the widely dispersed and weak shareholders. Ownership structure in China, however, is characterised by ownership concentration. The conflict of interest is dominantly between the controlling shareholders and minority shareholders, which often lead to expropriation of minority shareholders by means of investing corporate resources in projects that maximise majority shareholders' interests. Also, much of M&A literature has been focused on M&A among listed non-state enterprises. The China context is rather different with many listed firms being either state-owned or legal-person owned. These ownership differences between developed countries and China might have implications on

the motives behind undertaking M&A and performance due to differences in organisational factors such as corporate governance.

Another methodological insight resides in the fact that this research makes use of a number of corporate governance variables which are unique to China as well as controlling for firm-specific and deal-specific characteristics. Few previous studies in the fields under review have incorporated these variables in their analyses. Most of the previous studies focused on abnormal returns drivers such as the method of payment, the listing status of the target firm, diversifying or focus acquisition, tender offer or merger, the relative size of the deal and debt levels. In addition to the above firm-specific and deal-specific characteristics, this study includes corporate governance variables related to ownership and board structure.

Yet another methodological insight resides in that fact that even if there is a relationship between corporate governance and bidder returns in ordinary least squares (OLS), it is unclear whether the parameter estimates will be consistent and unbiased. Thus, OLS results suffer from a potential correlated omitted variable problem (endogeneity).

Although prior research acknowledges the existence of endogeneity, the literature does not consistently account for it using formal econometric methods. The instrumental variables (IV) are often chosen arbitrarily and few diagnostic statistics are performed to assess the adequacy of IV estimation. This study aims to adopt the IV approach to mitigate endogeneity problem using the two-stage least squares (2SLS), limited information maximum likelihood (LIML) and generalised methods of moments (GMM), the related diagnostic statistics for assessing the validity of instruments and some recent advances in econometric research on weak instruments.

Third, this study aims to make some practical contributions given that M&A constitute business decisions with socio-economic importance not only to the firms' stakeholders but for the whole society as well. Given the high number of high profile corporate failures, usually expressed through the ineffectiveness of boards, lack of transparency and widespread senior management malfeasance, the results from this study could possibly encourage shareholders and policymakers to revise corporate governance practices to prevent future failures.

1.3.4 Limitations of this thesis

This study examines how corporate governance influences short-term and long-term bidder returns from China's domestic M&A activity. As with any other research projects, there are some factors that will limit the scope of this project. First, the thesis covers announcements made between 2002 and 2011. The period covered by the sample was carefully chosen to eliminate the effects of changes to accounting period requirements and legislative changes in the late 1990s. For example, corporate governance guidelines issued in 2001 while company law was issued in December 1993 and revised in 1999. Second, the study exclusively focuses on the impact of corporate governance on returns to the bidder firm and thereby excludes the wealth effects on target shareholders. The reason being that empirical evidence on target stock performance around and following M&A announcement is relatively clear therefore not of much interest to researchers. Third, the study examines only internal corporate governance mechanisms impact on abnormal returns. Although this limits the scope of the research, it was deliberately chosen as managers have direct control of internal environment but have no control over the external environment. Furthermore, internal and external corporate governance are regarded as substitutes with the external mechanisms becoming important if the internal mechanisms fail.

Fourth, the study entirely uses the event study methodology and calendar time portfolio returns as tools for measuring bidder firm shareholder wealth effects and therefore, neglects other research approaches such as accounting operating performance results and surveys of executives. For example, a survey asking those involved in decision-making could have eliminated the bias that may be poised using secondary data. As the event study methodology requires stock data for calculating abnormal returns, this study focuses only on listed bidder firms. This further limits this study from studying bidder firms which are privately owned because their shares are not tradable on a stock exchange.

1.4 Outline of the thesis

This study is organised into eight chapters as outlined below. The next chapter critically reviews empirical literature relevant to this study. Definitions of the keys terms used in this study are provided as well as a brief review of merger waves. The motives behind M&A and theories of corporate governance that have been advanced are discussed.

Chapter 3 discusses the institutional setting of China in detail. It reviews the overall institutional setting in China that is, economic development, structural changes, capital markets and, the corporate law and corporate governance. In the context of Chinese M&A, the chapter explores the pivotal role the state plays as both a regulator and a stock market player.

Chapter 4 formulates the Research Questions and develop hypotheses that test the impact of corporate governance variables on M&A stock performance in both the short-term and long-term. This allows the present study to carry out the empirical tests in Chapter 6 and 7.

Chapter 5 presents the research design, which details the data collection, and the empirical measures used to test the hypotheses. The chapter focuses on operationalising the constructs developed in Chapter 4 and outlines the basic characteristics of the model underpinning the analysis of the impact of corporate governance variables on bidder returns.

Chapter 6 provides the analysis of the short-term data. The short-term daily abnormal returns over the eleven-day event window are reported. The univariate tests results are reported in the first section. Multivariate analysis results are also reported in the chapter. Also reported are the robustness tests results. The chapter concludes with a summary of the findings.

Chapter 7 provides the analysis of the long-term data. The long-term monthly abnormal returns over the twenty-four-month event window are reported. The univariate tests results are reported in the first section. Multivariate analysis results are also reported in the chapter. Also reported are the robustness tests results. The chapter concludes with a summary of the findings.

Chapter 8 concludes the thesis with an explanation of how the Research Questions have been answered. The chapter presents contributions to the knowledge and offers limitations of the study, along with suggestions for future research. The chapter presents the conclusion, which summarises the results and the contribution of the thesis.

Chapter 2 Review of Relevant Literature

2.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. This chapter reviews and discusses the existing theoretical and empirical literature on value creation in the context of domestic M&A and its determinants in the short-term and long-term. Evidence from prior studies indicates that overall, M&A do not create value for bidder firm shareholders either around announcement date and for the long-term time horizons following acquisitions. Earlier studies attributed the negative performance to the firm or deal-specific characteristics but recent studies have since recognised the importance of corporate governance in influencing M&A performance. However, little is known of this relationship. The literature review should not be considered as a complete review of all the vast M&A and corporate governance literature, rather it focuses on articles discussing the models which provide the foundations of this study.

The chapter is organised as follows: Section 2.2 defines and describes the key terms as they are used in this thesis before a discussion on what motives managers to engage in M&A in section 2.3. Section 2.4 reviews literature on bidder returns around and following M&A deal announcement. Section 2.5 reviews the theories that underpin corporate governance. The empirical literature on internal corporate governance structures and their linkage to bidder returns with an emphasis on ownership structures and board characteristics are reviewed in section 2.6. The chapter ends with a concluding summary in section 2.7.

2.2 Definition of key terms

Both terms *mergers and acquisitions (M&A)* and *corporate governance* represent complex areas of investigation that require extensive knowledge and understanding of the special terminology and concepts relating to them. Some basic information describing the key terms as used in this thesis are given below.

2.2.1 Mergers and acquisitions (M&A)

The terms *merger* and *acquisition* are common terms in the corporate finance literature. In a *merger*, two or more firms combine to form a single entity (Megginson & Smart, 2008). Both firms involved in the merger cease to exist resulting in a totally new firm. The

shareholders of the merging firms often become joint owners of the resulting entity. In an *acquisition*, one firm purchase the assets or shares of another and the shareholders of the acquired firm cease to be owners of that firm (DePamphilis, 2012). The acquired firm thus becomes a part of the bidder firm that is, a subsidiary of the bidder. Whether the transaction is classified as a merger or an acquisition, the shareholders must approve it through a vote. Often the *bidder or bidder firm* (making the purchase) makes a *tender offer* to the *target* firm (being purchased) management who if agreeable will take the proposal to the shareholders for a vote. This is considered a *friendly takeover* and most mergers fall into this category. However, if management is against the offer, the bidder firm may directly approach the shareholders. This is considered a *hostile takeover*.

Although the terms mergers, acquisitions and takeover have different definitions, the end result is the same that is, two or more firms operating as one after a corporate event (Sherman & Hart, 2006). It is for this common result that these terms are often used interchangeably (for example see Arnold, 2005). For simplicity, the present study adopts the same approach and uses the terms M&A, mergers, acquisitions and takeovers interchangeably for the remainder of the thesis.

2.2.2 Types of M&A

Ross, Westerfield, and Jaffe (2010) suggest three types of M&A each with a different strategic rationale: horizontal, vertical, and conglomerate. Bhalla (2006), identifies a fourth type: congeneric or circular merger. A *horizontal merger* involves firms in the same line of business. These M&A lead to the elimination of competition, leading to an increase in market share and a degree of concentration of the industry. It can also be used to protect the dominance of an existing firm. However, it may improve the efficiency and economies of scale of the bidder firm (Arnold, 2005). A *vertical merger* involves firms that are either a supplier or a customer to each other. The economic benefits of this type of M&A stem from increased market power, control over raw materials and the distribution of finished goods. Such synergies make the business extremely profitable because of reduction of costs and drive out competition. A *conglomerate merger* involves firms in unrelated businesses by either value chain or peer competition. Its advantage is that it reduces operational risk than the risk of the firms standing by themselves (Coyle, 2000). Conglomerates are formed with the belief that one central office would have the know-how or knowledge and expertise to allocate capital and run the business better than how they would be run independently

(Bruner, 2004). A *congeneric or circular merger* involves firms in the same general industry but not in the same line of business nor a supplier or customer (Brigham & Houston, 2009). The benefit of this type of merger and acquisition is the resulting ability to use the same sales and distribution channels to reach customers of both businesses (Bhalla, 2006).

2.2.3 Domestic and cross-border M&A

M&A can be classified by the geographical location of the registered offices of the bidder and target firms. Where the M&A transaction involves firms registered within the same country, it is called a domestic merger or acquisition. Where the M&A transaction involves firms headquartered in different countries, it is referred to as a cross-border merger or acquisition. Due to increased globalisation, cross-border M&A are now a major component of foreign direct investments³. For example, in 2015 cross-border M&A accounted for 60.6% of developed countries' FDI inflows.

2.2.4 M&A waves

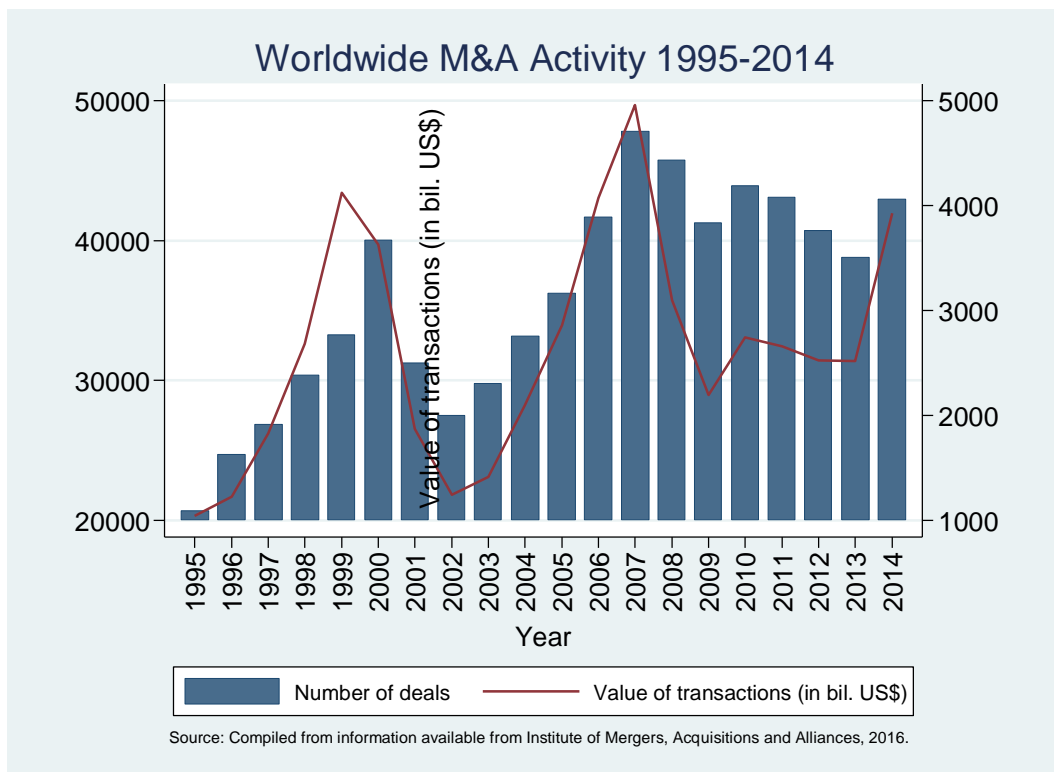
It is now conventional wisdom that M&A tend to cluster in certain moments in time and contingent upon the economic conditions of the period the merger takes place (Tse & Soufani, 2001). DePamphilis (2012) and Megginson and Smart (2008) identify that M&A activity has tended to cluster in six multiyear waves since the late 1890s (see Figure 2.1). They identify the waves as first wave (1897-1904), second wave (1916-1929), third wave (1965-1969), fourth wave (1981-1989), fifth wave (1992-2002) and sixth wave (2003-2007). Academics and practitioners concur that there are many forces of change that impact the level of M&A activities in a wave. These forces have been named as technological change, globalisation, deregulation, and favourable economic and market conditions (Weston, Mitchell, & Mulherin, 2004).

The first wave was characterised by the horizontal consolidation of industrial production which led to the creation of monopolies. The driving forces behind this wave were the technological advancement, favourable economic conditions and the development of the NYSE and new corporate legislation (DePamphilis, 2012; Megginson & Smart, 2008). The

³ This data comes from Investment Trends Monitor Report No. 22, January 2016, UNCTAD. The total FDI inflows for developed countries was US\$936 billion and cross border M&A US\$567 billion

second wave was characterised by small firms coming together to challenge the market dominance of the monopolies created during the first wave (Megginson & Smart, 2008). This led to increased concentration of industry and oligopolistic competition and came to an end at the onset of the stock market crash of 1929 (DePamphilis, 2012). The driving forces behind this wave were mainly the economic boom brought by the First World War and post-war boom (DePamphilis, 2012). The third wave was characterised by diversification which led to the emergence of large conglomerates. The driving forces of change were growing stock markets and sustained economic growth rates (DePamphilis, 2012). The fourth wave was characterised by the breaking up of the inefficient conglomerates, hostile takeovers and, an increase in leverage buy-outs and management buy-outs. The driving forces of change were anti-trust law changes, deregulation of

Figure 2.1: Worldwide M&A Activity 1995-2014



financial services and creation of new financial instruments, and technological advancement in the electronics industry (DePamphilis, 2012). The fifth wave was driven by globalisation, deregulation, privatisation as well as booming stock markets (Megginson & Smart, 2008). The concept of a global village led to firms wanting not only to be able to compete nationally but internationally through cross-border and industry related M&A.

Finally, the latest wave was driven by increased globalisation, the opening of once-closed economies and easy accessibility of financial resources on the world markets and creative financial instruments such as securitisation. The wave came to an end because of the subprime crisis and the credit crunch that hit the world economy in 2007.

The discussion above illustrates that although all the six merger waves show distinctive characteristics, they also share some common characteristics. Each merger wave starts because of favourable economic and market conditions, thus, M&A activity benefits from rapid credit expansion and booming stock markets. Also, each merger wave occurs when firms in an industry react to shocks in their operating environment such as financial innovations, technological innovations, increased competition, privatisation, deregulation and globalisation (DePamphilis, 2012). Finally, each wave ends with a collapse of the stock markets (Megginson & Smart, 2008).

2.2.5 Corporate governance

The term corporate governance has been defined in many ways because it covers potentially many distinct economic phenomena. Some definitions restrict corporate governance to the relationship between shareholders and managers. Other definitions consider the existence and importance of a wider body of stakeholders. Yet other definitions take it from a legal perspective. Thus, instead of providing one definition a list of the few of the different definitions is provided below.

The Report (1992) provides the most widely used definition of corporate governance. The report defines corporate governance as “the system by which companies are directed and controlled” (para. 2.5).

Shleifer and Vishny (1997, p. 737), provide a narrow definition of corporation governance as the relationship of a firm to its owners. They define corporate governance as “... the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment”.

Tricker (1984, p. xi), brings in more players into the definition of corporate governance. Tricker looked at corporate governance as “... the issues facing boards of directors, such as interaction with top management, relationships with the owners and others interested in the affairs of the company, including creditors, debt financiers, analysts, auditors and corporate regulators”.

Some definitions look at corporate governance from a legal perspective that is, rules and procedures that govern the conduct of firms. Blair (1995, p. 19), defined corporate governance as about “the whole set of legal, cultural, and institutional arrangements that determine what public corporations can do, who controls them, how that control is exercised, and how the risks and return from the activities they undertake are allocated”.

OECD (2004), provides a functional definition of corporate governance. “Corporate governance provides a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined” (p. 11).

The differences in definitions give rise to different systems of corporate governance which are “distinguished according to the degree of ownership and, control and the identity” of controlling shareholders Maher and Anderson (1999, p. 2). On one hand, there are systems characterised by widely dispersed ownership and on the other hand are systems characterised by concentrated ownership. The dispersed ownership system is often known as the Anglo-Saxon system because of its origins in the UK and the US. The concentrated ownership originated in Germany and therefore is also known as the Germanic system. In an Anglo-Saxon system, the conflict of interest is between managers and, the widely dispersed, faceless and weak shareholders. However, in the Germanic ownership structure, the conflict is between the controlling and participating shareholders, and minority shareholders (Maher & Anderson, 1999). The two systems also differ in terms of board systems. The Anglo-Saxon system has a unitary board system dominated by independent non-executive directors. The Germanic model has a two-tier board system with clear separation of duties of the two. The management board is charged with the day-to-day running of the firm and the supervisory board oversees the strategic operations of the firm.

Corporate governance is concerned with both internal corporate structures and, external control mechanisms and stakeholders (Mallin, 2010, p. 7). Internal corporate mechanisms include institutional shareholdings, the structure and role of the boards, the role of the CEO, internal control systems and, incentive systems in place to measure and reward the performance of employees of the firm while external mechanisms include capital markets, product markets, managerial labour markets, and the market for corporate control (Sundaram, 2004, pp. 196-197). Internal and external mechanisms are viewed as substitutes

in that; external mechanisms will become more important if the internal mechanisms fail (Sundaram, 2004). It is in this context that the present study examines the impact of internal corporate governance mechanisms on abnormal returns.

2.3 Mergers and acquisition motives

Over the decades, firms the world over have used M&A as a vehicle to grow their businesses (Sundaram, 2004). M&A present long-term corporate investment by the bidder firm and therefore must be guided by the same economic principles of an investment that management should only accept an investment decision if it has a positive net present value (Ross et al., 2010). M&A are often far larger than most of the other investments a firm normally makes, resulting in a significant impact on the shareholders' wealth through the reaction of the markets to their announcement as either positive or negative. When the market reacts positively (negatively), the share price increases (decreases), thereby creating (destroying) value for the shareholders.

There is evidence from prior research to suggest that bidder firm shareholders earn zero, negative or at best an insignificant positive abnormal returns around the announcement date (Tuch & O'Sullivan, 2007). Several explanations have been put forward to explain the rationale behind firms engaging in M&A activities. The explanations identified from literature have been grouped into three motives: synergy, agency and hubris (Hitt, Harrison, & Irel, 2001).

2.3.1 The synergy motive

The main reason why management engages in M&A is that it increases shareholder value through synergetic gains (Hitt et al., 2001; Pettitt & Ferris, 2013). Synergetic gains are “based on the assumption that the anticipated value of the entity created by the merger of two firms will exceed, in terms of potential wealth creation, the sum of the respective values of the two separate firms” (Ayadi & Pujals, 2005, p. 22). In this respect, managers aim to maximise shareholder wealth suggesting that both targets and bidders gain during the takeover activity (Berkovitch & Narayanan, 1993). When both targets and bidders gain, it can be expected that combined firms also obtain the benefits after the transaction. Typically, M&A activity creates operating, financial and managerial synergies.

Operational synergy results from economies of scope and scale, greater pricing power, elimination of duplicates and reduced agency costs. Most researchers suggest that operating synergies are the most common source of synergetic gains (Weitzel & McCarthy, 2011). In a study of the motives behind 77 US acquisitions in 1985 and 1986 Bhide (1993), reports that operating synergy is the primary motive in one-third of the takeovers. Other research findings report that operating synergies will be created mainly when the merging firms are in the same or related industries (Martynova & Renneboog, 2006).

Financial synergies result from the low systematic risk of the firm's investment portfolio as a result of diversifying M&A (Trautwein, 1990). They can also result from the low cost of capital and increase in debt capacity resulting from the size of the combined firm and more stable and predictable earnings and cash flows. Lev (1983), records that financial synergy is achievable both in the short-term and long-term.

Managerial synergies result from a combination of different functional strengths (Ross et al., 2010) such as superior planning, monitoring abilities and strong marketing (Hitt et al., 2001; Trautwein, 1990). If a firm has an excess of these strengths can achieve synergy by acquiring a firm that is inefficiently managed due to shortages of such resources.

2.3.2 The hubris motive

The hubris motive proposes that managers undertake acquisition activity intending to create shareholder value but may mistakenly judge the potential for economic gains (Berkovitch & Narayanan, 1993). The hubris motive also assumes complexity, uncertainty and information asymmetry between transacting partners in the institutional environment which may result in paying a premium for the acquisition (Weitzel & McCarthy, 2011). Two explanations have been identified from the literature on why bidders overpay for targets.

The first explanation is that management of a bidder firm relies heavily on their several years of superior performance and thus become overconfident resulting in an overvaluation of target firm (e.g. see, B. S. Black, 1989; Roll, 1986; Y. Wang & Hickson, 2009). In this case, the shareholders lose value not as a reflection of purely selfish intentions but as a result of unrealistic expectations on the part of the bidder firm's management (Hagendorff et al., 2007). However, despite the good intentions hubris destroys firm value and consequently shareholders lose. Empirically, there is strong evidence of hubris in both US and European takeovers (Goergen & Renneboog, 2004).

The second explanation is that it is not only overconfidence that destroys shareholder value but also excess liquidity, or free cash flow. Managers with free cash flow at their disposal will invest it in negative net present value projects rather than declare it as dividends to shareholders (Jensen, 1986). Again, excess liquidity coupled with the prohibitive costs of monitoring to shareholders can lead to manager's poor decisions go unchallenged than they would be in the absence of free cash flow (Weitzel & McCarthy, 2011). There is evidence from prior studies that the market react negatively to M&A announcements of firms by bidders with large cash balances (Harford, 1999).

2.3.3 The agency motive

Managers may engage in M&A activity simply to enrich themselves at the cost of shareholders (Weitzel & McCarthy, 2011). The agency motive assumes that in the absence of effective monitoring, managers have the motive to pursue their own self-interest. Two reasons are identified from literature for this opportunistic behaviour.

First, managers may engage in M&A activity that compromises corporate performance, to minimise the risk of being replaced (Hagendorff et al., 2007). In this case, management makes manager-specific investment decisions such as acquisitions that make it difficult and costly for shareholders to replace them. Empirically, there is evidence that management undertakes conglomerate mergers to decrease risk, which in turn guarantees firm survival and firm size benefits in favour of management (Wright et al., 2002) but detrimental to shareholder wealth (Morck, Shleifer, & Vishny, 1990).

Second, management does not pursue acquisitions activity for job security only but also for the wealth, power, reputation and fame that come with it. Managers may aim to maximise their own interests by increasing firm size or diversifying operations (Carline, Linn, & Yadav, 2009). As the firm grows, it becomes *too big to fail* and a justification for higher remuneration and perquisites. Empirically, there is evidence that empire building provides the motivation for management to pursue acquisitions activities (Weitzel & McCarthy, 2011). If M&A are motivated by managers' self-interests, the transactions may not necessarily create value for bidders although targets still obtain gains due to higher bargaining power.

2.3.4 Mergers and acquisitions motives in China

Rescuing poorly managed and financially distressed SOEs, consolidation of defragmented industries and development of internationally competitive firms are the main three motives for Chinese firms to participate in domestic M&A activities. Most of the M&A involve large SOEs who dominate China's capital markets and acquire mainly small privately-owned firms. Thus, they are likely to pay less for the target firms as the M&A deals are not at arm's length transactions. However, stock markets have also become popular among domestic investors, as they are one of the very limited numbers of investment vehicles open to them. Initially, these investors would invest without considering the information or fundamentals related to the firm (J. K. Kang, Liu, & Ni, 2002; X. Ma, 1996; Nam, Park, & Kim, 1999). The Chinese government has deliberately encouraged M&A to reduce the financial burden of SOEs and develop business groups in some key industries to enhance competitive of Chinese firms through economies of scale and improved firm performance. Since China's admission to the WTO in 2002 and foreign investment availability, most Chinese firms have turned to M&A as a vehicle to finance their businesses to meet the challenges of WTO and increased competition.

However, the absence of a well-developed market for corporate control, adds a new twist to the picture. An efficient market for corporate control disciplines underperforming managers while a dynamic M&A market leads to takeovers. In China, since top firm executives and board are appointed by the government means their performance is assessed by the government rather than shareholders in the market. The government, by nature, pursues political and social objectives and therefore managers engage in M&A to increase their political influence and social status which are linked to the reward system. Managers are thus, motivated by empire building. Due to the dominance of state ownership in listed firms, they override decisions of minority shareholders leading to the unique agency problem; the conflict between majority shareholders and minority shareholders.

2.4 Bidder returns

In this section, literature relating to shareholder wealth performance in the short-term (around announcement date) and long-term (post-acquisition) is reviewed, providing a summary of the current knowledge that sheds some light on our **Research Question 1**.

2.4.1 Short-term bidder returns

Researchers have generated several studies on domestic M&A and its effect on the shareholders' wealth around announcement date. Evidence from prior studies suggests that for investors in the combined bidder and target firms, M&A activity creates net gains. The evidence does suggest that target firms' shareholders enjoy significant positive returns around M&A announcement date. However, bidder firm shareholders earn a small positive return, zero return or negative return in the short-term.

There are a few studies on M&A in China as the concept was only introduced in China in 1993 after the formal establishment of the two stock exchanges. Hence, research on M&A in China is limited. The existing literature that examines M&A performance generally finds positive abnormal returns around announcement date, contrary to the mixed results from previous studies in other countries such as the UK and the US (see Appendix A). The findings are, however, consistent with studies from economies outside the UK and the US such as Canada, Holland, European Community countries and India. Earlier Chinese studies provide mixed results. S. Li and Chen (2002) in a study of 349 events between 1999 and 2000, find positive returns for bidder firms and negative returns for targets, which they attribute to state intervention in the process and the private firm liquidity discount. By contrast, X. Zhang (2003) using a sample of 1,216 deals announced between 1993 and 2002, find negative returns and conclude that hubris and agency hypotheses explain why bidding companies lose value. Later studies provide a much clearer picture indicating the positive steps taken by the state to reform the economic landscape.

Using a large sample size of 1,148 acquisitions from 1998 to 2003, Chi et al. (2011) investigate the performance and characteristics of bidder firms. They find positive and significant abnormal returns of 0.3% over a three-day event window. Chi et al. (2011), research also highlights that political advantages have significantly positive impact on the bidders' performance, while economic advantages do not. Similarly, E. L. Black et al. (2013) examining 415 domestic acquisitions announced between 2000 and 2009 find that bidder firm shareholders earn positive and significant returns of 2.8% over a three-day event window period. More recently, S. Li et al. (2011) in a 246 study of state-controlled listed firm acquisitions completed between 2001 and 2006 find positive and significant abnormal returns of 1.2% over a seven-day event window.

Using a sample of 214 block shares transfer from 2003 to 2004, Shen (2008) analyses the market reaction and its determinants using event study methodology under the background of China's property rights reform. The empirical results show that the market's reaction is significantly positive and acquirers' shareholders earn abnormal returns of about 1.2% from 20 trading days before the event to 1 trading day after the announcement. An earlier study by X. Song, Zhang, Chu, and Song (2008) examines the short-term performance of 23 cases of stock-for-stock M&A during the period 1998 to 2007 and finds that bidder firm shareholders obtain positive but insignificant abnormal returns. For a sample of 213 acquisitions from 1999 through to 2005 over a 21-day (-10, +10) event window, Z. Ning (2009) records positive abnormal returns of 2.8%. Further, using a sample of 408 Chinese acquisitions L. Huang (2010a) finds positive abnormal returns of 32.8% from 30 trading days before the event to the announcement date. L. Huang (2010a), concludes that firms whose stocks are overvalued are more likely to engage in acquisition transactions and the markets react positively to M&A announcement in the short-term.

The synergetic effect explains why bidder firms gain value and M&A are popular in China (J. Zhang & Wang, 2006). Also, the involvement of the state in M&A process both as a player and a regulator may limit the bargaining power of the target firms (S. Li & Chen, 2002). Target firms usually end up taking whatever they are offered for fear of reprisals from the state due to weak shareholder protection. In China context, it can reasonably be concluded that bidder firms earn positive abnormal returns indicating that bidder firms undertake M&A that create value for shareholders, which is consistent with studies from other countries outside of the US and the UK.

Research evidence from developed countries is inconclusive. First, evidence from studies on the total value creation from M&A activity shows that the combined returns to shareholders of the bidder firm and the target firm obtain significant positive returns. In a study of 281 the US acquisitions, Mulherin and Boone (2000) find positive returns of 3.6% to both bidding and target firms' shareholders during the period 1990-1999. Also, Kuipers, Miller, and Patel (2002) in a study of 120 OECD acquisitions find positive returns of 4.3% over the period 1982-1991. Recently, Campa and Hernando (2004) in a study of 262 EU acquisitions over the period 1998-2000 record positive returns of 1.3%. A study from France by Aktas, de Bodt, and Declerck (2002) further supports findings from the US and the EU. They find positive returns of 2.1% for 37 acquisitions announced during the period

1995 and 1999. In short, the studies suggest that M&A activity creates net gains for the investors in the combined buyer and target firms and thus, presumably, for the economy.

Second, evidence from studies on M&A activity wealth gains consistently shows that target shareholders earn significantly positive returns. A study by Bradley, Desai, and Kim (1988) shows that target shareholders obtain abnormal returns of up to 31.7% using tender offer sample from 1963 to 1984. Similarly, Lang, Stulz, and Walkling (1989) in a study of 87 US acquisitions announced between 1968 and 1986 find positive returns for target firms of 40.3%. In the same year, Jarrell and Poulsen (1989) in a bigger sample of 526 US acquisitions find positive returns of 29.07% for the announcement made during the period 1963-1986. Also, Servaes (1991) find positive returns for target shareholders around announcement date for a sample of 704 US mergers and tender offers over the period 1972-1987. In addition, Healy, Palepu, and Ruback (1992) find a large positive return to targets in a study of 50 US acquisitions over the period 1979-1986. Recently, Kuipers et al. (2002) find over 20.0% abnormal return to targets using 181 US targets with foreign bidders during the period 1982-1991. In a study of a sample from the European Union acquisitions Campa and Hernando (2004), find that shareholders of the target firm earn significant abnormal returns of 9.0% in two weeks before and after the announcement date. In support, Bruner (2002) finds that M&A transactions returns for target firm shareholders are positive and significant. Some studies observe that target firms achieve some synergies in procurement or economies of scale and make higher profits than rival firms did (C. E. Ward & Jong-In, 2002).

The above review results are consistent with the synergy motive of efficiency which suggests that M&A will only occur when the expected realisable synergies of the deal are beneficial to both parties. It follows therefore that, if the target firm does not foresee gains in the deal then the target firm's shareholders would not sell or submit to the acquisition. The argument is supported by Sundaram (2004) who pointed out that "target board is effective in extracting up-front much of the present value (PV) of expected future synergies from the bidder via the premium ..." (p. 213).

Third, empirical evidence has not been conclusive about wealth creation for bidders in the short-term using event study methodology (see Appendix A). On one hand, there are some recent studies that report negative returns for bidder firms in the short-term. Earlier studies (e.g. see, Asquith, Bruner, & Mullins, 1987; Byrd & Hickman, 1992; Dodd, 1980); Healy

et al. (1992); (Morck et al., 1990; Sudarsanam, Holl, & Salami, 1996) found negative abnormal returns in the short-term period (not tabulated). In a study of 363 UK acquisitions between 1985 and 1996, Cosh et al. (2006) find negative and significant abnormal returns of -1.1% which is consistent with Sudarsanam and Mahate (2003) study who report -1.4% abnormal returns over a three-day period surrounding the announcement date. Using a sample of 294 US acquisitions over an almost same period, 1994-1998, Swanstrom (2006) report negative and significant abnormal returns of -2.7%. Selected studies with large sample sizes seem to record shareholder losses for bidder firms. In a study of 1,249 US acquisitions between 1994 and 2005, Bauguess and Stegemoller (2008) record negative abnormal returns of -0.2% and Sudarsanam and Huang (2007), studying 1,849 acquisitions record abnormal returns of -0.5%. Other recent studies find negative abnormal returns of varying levels (e.g. see, Ahn, Jiraporn, & Kim, 2010; Kroll et al., 2008; Levi, Li, & Zhang, 2008; Reis, 2008; C. Wang & Xie, 2009).

On the other hand, some recent studies report small positive returns for bidder firms around M&A announcement date. In a recent study of 1,719 US acquisitions from 1993 to 1998, Datta, Iskandar-Datta, and Raman (2001) find positive and insignificant shareholder abnormal returns around announcement date of 0.02%. Another recent study from the US by Fuller et al. (2002) record a positive gain of 1.8% for a sample of 3,135 acquisitions between 1990 and 2000.

Studies from other countries outside the US and the UK report positive returns for bidder firms indicating different institutional environment. In a study of 1,477 acquisitions deals from ten Asian markets, J. Ma, Pagan, and Chu (2009) find an average positive and significant returns of 1.7% over a 5-day event window for bidder firm shareholders. This may be attributed to highly concentrated ownership of listed firms in those markets either by the state or family groups (Claessens, Djankov, & Lang, 2000). Similarly, studying 262 M&A in the EU, Campa and Hernando (2004) find that bidder firm shareholders receive a cumulative abnormal return of 0.6% in thirty days before and after the announcement date. In a study of 327 Canadian acquisitions between 1998 and 2002, Ben-Amar and Andre (2006) find positive and significant abnormal returns of 1.1%. Similarly, Kumar and Panneerselvam (2009) in a recent study of 252 acquisitions successfully completed between 1998 and 2006 from India record a positive gain of 1.2% over a three-day event window. Studying the same market but different sample periods, Rani, Yadav, and Jain (2013) find

bidder firms earn positive and significant abnormal returns of 1.96% over a five-day event window period for a sample of 155 acquisitions announced in India between 2003 and 2008. In addition, Jong, Poel, and Wolfswinkel (2007) examined the returns to bidders in 865 Netherlands acquisitions from 1993 to 2004. For bidder firms, they find significant and positive abnormal returns of 1.1% over the period of study. They conclude that the result suggests that corporate governance improves acquisition decisions. A recent study from Italy by Rossi (2012), find positive and significant abnormal returns of 2.5% over a 21-day event window.

As demonstrated in Appendix A, studies that report negative abnormal returns are from the US and the UK. Out of the 11 studies, 9 are from the US and 2 from the UK. The event window varies considerably between studies with some studies incorporating 3-day event windows while others incorporating 61-day event windows. It can also be seen that more recent studies report increasingly negative performance of bidders. However, evidence from other economies tends to be more positive than findings reported for the US and the UK. For all the selected studies (Appendix A) abnormal returns range from 2.5% to -3.0%, with an average of -0.4%. Also, sample size varies considerably from 120 (Rossi, 2012) to 5,848 (Doukas & Petmezas, 2007). It can reasonably be concluded that on average, the abnormal returns to bidder firms is negative, indicating that bidders make M&A decisions that destroy shareholder value.

2.4.2 Long-term bidder returns

In the context of M&A in China, there is growing literature on long-term stock performance. Appendix B demonstrates that long-term bidder returns for Chinese bidder firms are positive. The difference in institutional settings may explain the opposing results with developed economies especially the involvement of the state as both player and regulator.

In one of the existing studies on long-term M&A wealth effects, Zhou et al. (2012) examined the influence of state ownership with particular reference to political connections on M&A. Using a sample of 811 successful M&A deals between 1994 and 2008, and applying 24 months BHAR methodology, Zhou et al. (2012) find that bidder firms earn positive and significant abnormal returns of 23.4% at 1% level. They also find that SOEs (24.6%) outperform private owned firms (16.9%) in terms of stock long-term performance

over the 24-month event window. They attribute that to the political connections of SOEs to the state. The state is directly involved in the Chinese M&A market through the appointment of managers and directors, as well as being the regulator. Political influence might enable them to obtain lucrative deals at no premium.

Boateng and Bi (2013), examine the effect of the method payment on bidder returns in the long-term for a sample of 1,370 announced deals between 1998 and 2008. They use the BHAR methodology over an event window of 12 months and applied the 50 size/book-to-market value portfolios to calculate expected returns. They find that bidders obtain positive and significant abnormal returns. They also find that cash financed transactions perform poorly in the long-term compared to those financed by stock. In another study Chi et al. (2011) who studied bidder returns for a sample of 1,148 events announced between 1998 and 2003 in the long-term using a 13-month event window consisting of 6 pre-M&A, the announcement month and 6 months post-M&A. They find that bidder firms obtain positive and significant abnormal returns at 1% level (see Appendix B). They also find that the performance was stronger in the six months before M&A than the six months after announcement which they attributed to leakage of information and insider trading. They concluded that the positive abnormal returns may be the result of low M&A competition (there is usually one bidder for a target) and that political connections play a pivotal role in value creation. This conclusion is shared by other prior studies (e.g. see, Alexandridis, Fuller, Terhaar, & Travlos, 2013).

A review of the literature (outside China) on long-term abnormal returns since 2000 (see Appendix C), shows that most of the studies record negative abnormal returns for the bidders. Earlier studies could not agree on the explanations for the negative abnormal returns in the long-term leading Jensen and Ruback (1983), in their review of long-term stock performance, to conclude that an “explanation of these post-event negative abnormal returns is currently an unsettled issue” (p. 22). Generally, studies on long-term stock performance are dominated by the US and the UK studies with only a couple of studies coming from Canada. There is, therefore, a dearth in literature in the context of long-term acquisitions from China. This thesis aims to fill the gap by studying long-term abnormal returns in a fastest growing economy: China.

Agrawal and Jaffe (2000), comment that before 1990s studies devoted solely to exploring long-term stock performance were very few. When a review of five studies on stock

performance a year after a successful M&A by Jensen and Ruback (1983) indicate that in four of the studies, bidders obtain negative abnormal returns⁴, perceptions changed as researchers sought explanations for the negative returns. By the turn of the 21st century, enough studies had been conducted to warrant another review. In a comprehensive review of twenty-two studies, Agrawal and Jaffe (2000) confirm that indeed, bidder firm shareholders lose value in the long-term after a successful M&A⁵. One notable development during the period of the review was the criticism levelled against methodologies used by the studies. Notable researchers Kothari and Warner (1997), Barber and Lyon (1997) and Lyon et al. (1999) all criticise the methods used for long-term stock performance. They advocate for the use of BHAR methods but adjusting for size and/or book-to-market ratio.

As Agrawal and Jaffe (2000) review came at the time that critics were developing new methodologies it was felt that a review of studies incorporating the recommended methods is carried out. Recently, Tuch and O'Sullivan (2007) carried out a comprehensive review that included studies reviewed by Jensen and Ruback (1983) and Agrawal and Jaffe (2000), and incorporated current ones⁶. Interestingly, all the additional studies report significant negative abnormal returns for bidder shareholders despite applying the new methodologies of adjusted BHAR (size, book-to-market), CAPM and calendar time approach. Tuch and O'Sullivan (2007), conclude that “the overwhelming consensus is that shareholders in bidding companies suffer significant wealth losses when long-term returns are considered” (p. 148).

Recent studies use sophisticated statistical software packages such as R and Stata applying bootstrapped and more recently block-bootstrapped skewness adjusted t-tests to avoid bias in the measurement of abnormal returns and still report same results. Sudarsanam and Mahate (2006), use the BHAR method and matched their sample portfolio with market-adjusted returns, size-adjusted returns and, size and market-to-book value of equity ratio adjusted returns. Using a sample of 519 successful UK takeovers completed between 1983

⁴ The studies reviewed include Dodd & Ruback (1977); Mandelker (1974); Langetieg (1978); Asquith (1983); Malatesta (1983). The study by Mandelker (1974) is the only one that reported positive abnormal returns. (See Jensen & Ruback (1983, p.21) for a table of the studies.

⁵ For a complete list of the studies see Table 1 from Agrawal & Jaffe (2000, p.10)

⁶ Additional studies include Sudarsanam & Mahate (2003: 2006); Conn *et al.* (2005); Alexandridis *et al.* (2006).

and 1995, the three benchmark models record negative and significant but different abnormal returns. The market-adjusted benchmark model record abnormal returns of -7.9% while size and, size and market-to-book value ratio adjusted BHAR record almost similar abnormal returns of -14.1% and -14.0% respectively. According to Loughran and Ritter (2000), the differences are expected due to the differences in powers of detecting abnormal returns performance wielded by different methodologies.

Following Lyon et al. (1999), Bouwman, Fuller, and Nain (2009) measured long-term abnormal returns using two methods; size and book-to-market value adjusted BHAR and calendar-time returns with Fama-French factors. Using a sample of 2,944 US acquisitions announced between 1979 and 2002, they find significant negative abnormal returns using BHAR and positive abnormal returns using the calendar time approach. The findings lend support to the Loughran and Ritter (2000) argument. Similar findings are recorded by Dutta and Jog (2009) in their study of 1,018 Canadian acquisitions completed between 1993 and 2002. They find negative and significant abnormal returns when matching by control firm (-0.5%) and, positive but not significant abnormal returns when matching by market index (0.001%). After adjusting for overlapping events, Dutta and Jog (2009) find no significant abnormal returns for the 229 events. In addition, in a study of 80 Australian acquisitions between 1999 and 2005, Chan and Emanuel (2011) find negative abnormal returns of -0.04% (significance level not reported).

As demonstrated in Appendix B, evidence from selected studies from developed economies reports negative and significant bidder returns in the long-term. Two studies from China positive and significant bidder returns in the long-term. However, one study from a Chinese sample reports negative and significant bidder returns in the long-term. Thus, while there is consistency in results from developed economies, results from China are mixed. The difference may be explained by the differences in political and institutional settings in developed economies and China. Specifically, the difference may be due to the dual role of the state in China.

2.5 Theories of corporate governance

Although corporate governance is a new phenomenon the theories that underpin its development are as old the first firm incorporation and are drawn from various disciplines ranging from finance, economics, accounting, law, management and organisational

behaviour (Clarke, 2004; Mallin, 2010; Solomon, 2007). The theories of corporate governance differ in perspectives and terminology, reflecting the fact that they originated from different disciplines. There are three major theories identified from literature: agency theory, stewardship theory and resource dependency theory.

2.5.1 Agency theory

This is the theory that has shaped the development of corporate governance (e.g. see, Alchian & Demsetz, 1972; Fama & Jensen, 1983; Jensen & Meckling, 1976; Mallin, 2010). The theory is derived from the agency problem presented by the separation of ownership and control (Berle & Means, 1932). Jensen and Meckling (1976, p. 308), describe “the agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent”. This delegation of decision-making authority by the principal to the skilled, qualified, competent and professional agents and the resulting division of labour are helpful in promoting an efficient and productive economy. However, as Jensen and Meckling testify, “... if both parties to the relationship are utility maximisers, there is a good reason to believe that the agent will not always act in the best interests of the principal” (p. 308).

On one hand, the shareholder (principal) delegates authority to the agent in the hope that the manager (agent) will deliver a good return on the principal’s investment in the firm in the form of capital growth and a steady stream of dividend pay-outs through investment in positive net present value projects. On the other hand, according to Jensen and Meckling (1976), managers are concerned with personal utility maximisation in the form of pay, perquisites, job security, social status and high short-term profit. Consequently, managers will make decisions that reduce instead of increasing shareholders value. For example, according to the free cash flow hypothesis, managers would rather invest in negative net present value projects than pay dividends to the principal (Jensen & Meckling, 1976). The principal, to align the agent’s interests and reduce the conflict of interests must put in place control mechanisms.

To ameliorate agency problems, principals appoint a board of directors who they give the fiduciary obligation to look after their interests by monitoring the activities of management. The board usually comprise both inside directors, those employed by the firm and outside

directors, those not employed by the firm. Recently, there has been an emphasis on the outside directors to be independent of management through economic, family or other ties before their appointment. Agency theory views board members who are independent of having less incentive to monitor management. Agency theorists also view board leadership structure where the CEO also serves as chairperson of the board as acting against board effectiveness. They argue that CEO role duality may lead to concentration of power in one individual who may not act in the best interests of the principals. In addition to the appointment of directors and separating the role of CEO and chairperson the shareholders can also through the remuneration committee, establish appropriate incentives for the agents to limit managerial opportunism. Another monitoring mechanism that shareholders can use is an audit. “An audit provides an independent check on the work of agents and of the information provided by the agents, which helps to maintain confidence and trust” (ICAEW, 2005, p. 7).

However, in modern day firms, the agency problem is not confined to the principal-agent relationship but also exists between controlling and minority shareholders. La Porta, Lopez-de-Silanes, and Shleifer (1999, p. abstract), note that “the central agency problem in large corporations around the world is that of restricting expropriation of minority shareholders by controlling shareholders ...” They also conclude that the problem becomes serious in countries where there are few mechanisms to protect minority investors and the control of the discretionary power of large shareholders.

Controlling shareholders, by the virtue of being the largest and participating shareholder, often have better access to information, hold more voting power in selecting management and get involved in key specific investment decision making such as mergers and acquisitions (Denis & Denis, 1994). As such, management often makes decisions that maximise shareholder value. However, large and participating shareholders are rarely challenged. In countries such as China, minority shareholders cannot take listed companies to court, due to limitations in the civil law and a lack of punishment spectrum in the most stock exchange laws (Q. Liu & Lu, 2007). In such an institutional setup, listed firms represent a nexus of a series of mainly related-party transactions that benefit controlling shareholders at the expense of minority shareholders.

S. Johnson, Lopez-de-Silanes, La, R, and Shleifer (2000), further argue that within the process of using control rights, controlling shareholders may try to maximise their own

welfare at the expense of the minority shareholders through tunnelling. Tunnelling activities can take the illegal form of outright theft or fraud, or the subtle legal form of dilutive shares issues that discriminate minority shareholders and M&A between affiliated firms siphon resources of the bidder or target (e.g. see, Bae, Kang, & Kim, 2002; S. Johnson et al., 2000; Sumiyana & Sari, 2010). Expropriation of minority shareholders by controlling shareholders takes many forms. First, controlling shareholders may expropriate minority shareholders by declaring non-divisible dividends and use profits for projects that benefit themselves. Second, controlling shareholder may declare special dividends only to themselves instead of paying out dividends based on shareholding (Shleifer & Vishny, 1997). Third, controlling shareholders may also expropriate minority shareholders by adopting transfer pricing that is below market value to firms they control (Shleifer & Vishny, 1997). The exploitation of small shareholders by controlling shareholders may stifle managerial initiative which may work against the spirit of performance-based incentive schemes (Burkart, Gromb, & Panunzi, 1997).

In China context, controlling shareholders engage widely in self-dealing through related party transactions (e.g. see, Cheung, Rau, & Stouraitis, 2006; Peng, Zhang, & Li, 2007a) such as inter-company transactions (e.g. see, G. Jiang, Lee, & Yue, 2010; Q. Liu & Lu, 2007). In a study of related-party transactions between Chinese listed firms and their controlling shareholders (Cheung et al., 2009) provide evidence that related-party transactions are not typically beneficial for minority shareholders. In addition, G. Jiang, Lee, and Yue (2005) document the widespread use of corporate loans by controlling shareholders to extract funds from the listed firms in China. In a recent study, Q. Liu and Lu (2007) provide some reasons for widespread tunnelling in Chinese listed firms. Firstly, they attributed tunnelling to the fact that most of the listed firms were carved-out from large SOEs and still share 'shared service departments such as IT and human resources with parent SOEs. The second reason is that as controlling shareholder, the state appoints managers and thus management end up making decisions that benefit the state. Finally, the controlling shareholder is rarely challenged by minority shareholders due to limitations in the civil laws.

However, shareholdings by large and controlling shareholders can also provide an incentive for diligent monitoring of management (Agrawal & Knoeber, 2012). Large shareholders especially institutions, address the agency problem as they both have a general interest in

profit maximisation, and enough control over the assets of the firm to have their interest respected and reduce managerial entrenchment (La Porta et al., 1999; 2000; Shome & Singh, 1995). In this case, the minority shareholders tend to enjoy the benefits of close monitoring by large shareholders through “*free riding*”.

2.5.2 Stewardship theory

Stewardship theory was expounded as an alternative explanation to the agency theory offering an opposite view of management behaviour and their motivation for work. Stewardship theory is founded on the assumption that “there is no conflict of interest between managers and owners” (Clarke, 2004, p. 8). As such, “managers should be fully empowered to run firms because they are good stewards of the resources entrusted to them” (Letza, Sun, & Kirkbride, 2004, p. 244). Human behaviour research supports this view and has identified that managers are motivated by the need for achievement, responsibility and recognition, and respect for authority. Overall, they want to be good stewards who act in the best interests of the shareholders (Donaldson & Davis, 1991; Kiel & Nicholson, 2003).

Opposite to the agency theory view, stewardship theorists favour a board of directors dominated by inside directors, who they perceive as specialists in the affairs of the business they run on a daily basis (Clarke, 2004). They also argue that since inside directors are involved in the day-to-day running of the firm, they are more likely to have a better understanding of the business than outside directors (Donaldson & Davis, 1991, p. 52). Again, stewardship theorists take “... a relaxed view of the need to separate the roles of chair and chief executive ...” (Clarke, 2004, p. 9). In agreement with agency theory, stewardship theory also notes that the success of corporate governance under this proposition depends upon the degree of freedom extended to managers to behave as stewards through managerial incentives, monitoring and disciplinary systems.

In China, socio-political life is dominated by loyalty, paternalism and collectivism which are consistent with stewardship theory. Managers are stewards rather than agents of the state who work towards fulfilling economic objectives of the firm and, political and social objectives of the state in what has been termed ‘state-stewardship’ (H. Liang, Renneboog, & Sun, 2016). Studies in China demonstrate that the leadership behaviours do not follow the agency assumptions, rather they favour the conditions of positive leadership expressed by the stewardship theory (Hu & Alon, 2014; Peng et al., 2007a).

2.5.3 Resource dependency theory

Resource dependence theory is the final supporting theory of corporate governance that this study relies on. Resource dependency theory takes the view that while the board of directors are appointed to monitor management, they also as individuals bring to the firm critical resources that it needs to maximise financial performance “such as information, skills, access to key constituents (e.g. suppliers, buyers, public policy makers, social groups) and legitimacy” (Clarke, 2004, p. 9).

Because of this benign view of the board of directors, resource dependency theory takes the view of the need for a large and diverse board. A large and diverse board may improve the internal workings of the board. For example, Hagendorff and Keasey (2010, p. 3) insists “the presence of knowledge and specific skills which cater to a board’s specialized needs may further an organization’s understanding of its marketplace and, thus, improve corporate performance when a board matches its diversity with that of customers or suppliers” (Carter, Simkins, & Simpson, 2003). Large and diverse boards may also improve monitoring of management. Hagendorff and Keasey (2010) argue that board diversity may stimulate board activism by raising many issues that are less likely to be discussed by more homogeneous groups. A large and diverse board may also serve as the link between the firms and its external resources and key stakeholders such as creditors, customers and competitors. As a result, it has been argued that greater levels of links to the external environment are associated with better access to resources and, improvement in corporate governance and firm performance (Jackling & Johl, 2009; Kiel & Nicholson, 2003).

Studies in China show that most of the listed firms are large former SOEs involved in both capital and manpower intensity industries such as energy, resources and other key industries (Liao, Young, & Sun, 2009). Such firms require large and diversified boards, in terms of skills, experience and political connections, to effectively monitor and advise managers.

2.5.4 Governance theories in China.

Studies from China demonstrate that corporate governance developed from the agency theory developed in the Western economies are not necessarily applicable in the Chinese setting (Hu & Alon, 2014; H. Liang et al., 2016; Peng, Zhang, & Li, 2007b). Leadership behaviours in China do not follow the agency assumptions inherent in Western economies, rather they favour the conditions of positive leadership expressed by the stewardship theory

(Hu & Alon, 2014). The applicability of the stewardship theory in China stems from the socio-political nature of the Chinese people. While in the Western economies managers are agents of the shareholders, in China, managers are stewards of the state (H. Liang et al., 2016). Although highly concentrated ownership may reduce the principal-agent problem between managers and shareholders, it creates a conflict of interest between majority shareholders and minority shareholders (principal-principal problem) (Young et al., 2008). The size of the listed firms and their complex operations require large boards with diversity in terms of skills and experience (Y. Ning, Davidson, & Wang, 2010). In addition, listed firms value connections and advice provided by directors as they seek to create linkages with the government authorities through boards (Agrawal & Knoeber, 2001; J. J. Choi, Park, & Yoo, 2007).

2.6 Corporate governance and bidder returns

This section reviews existing literature on the influence of corporate governance on bidder returns. Where there is no direct studies available reference will be made to the impact of corporate governance on firm profitability. The review in this section will highlight current knowledge of issues relating to our **Research Question 2**.

Generally, the legal procedure to accomplish domestic corporate M&A is that the board passes a resolution adopting a plan of M&A. All shareholders are then notified culminating in a shareholders meeting where the proposal should be approved by most shareholders. After shareholders' approval, the board then signs off the M&A. As such it is hypothesised that both the board and shareholders are able to distinguish between good and bad M&A and only approve those that improve the wealth of shareholders that, deemed good (Chan & Emanuel, 2011). The involvement of both board and shareholders in the M&A process makes it possible to study the link between the M&A motives and, board governance and shareholder ownership.

Hypothetically, synergy motive is associated with good corporate governance as the board and shareholders would have approved M&A that increases shareholder wealth (Chan & Emanuel, 2011). Evidence from prior research indicates that M&A motivated by synergy result in positive abnormal returns for the shareholders (Hitt et al., 2001). However, empirical evidence seems to suggest that if M&A is motivated by hubris, shareholders earn negative abnormal returns (Roll, 1986). If the deal has been ratified by the board and

approved by the shareholders, it reflects a failure to control value destroying M&A decisions and therefore hubris motivated M&A are associated with bad corporate governance. It has become conventional wisdom that managers may initiate M&A simply to maximise their personal utility at the expense of shareholders (agency motive). This behaviour has to be closely monitored by the board of directors as representatives of shareholders which is known as decision control (Jensen & Meckling, 1995). Therefore, if shareholders value is consistently negative upon M&A announcement, then that “could reflect uncontrolled hubris or agency issues, which in turn may indicate [bad] governance” (Chan & Emanuel, 2011, p. 179).

2.6.1 Ownership structure

Previous research highlights the importance of the ownership structure in determining bidder returns around M&A announcement date (Shim & Okamuro, 2011). The effects of equity ownership by institutional investors and inside ownership have been effectively studied (Ahn et al., 2010; Cosh et al., 2006). Of interest is that most studies concentrate on mature markets where there is diffused share ownership and the conflict of interest is mainly between managers and the widely dispersed and weak shareholders. Ownership structure in China, however, is characterised by ownership concentration and domination by the state. In 2008, of the 1,604 listed firms on Shanghai and Shenzhen Stock Exchanges, the top five shareholders controlled about 51.0% of the total outstanding share (N. Liang & Useem, 2009). The conflict of interest is dominantly between the controlling shareholders and minority shareholders, which often lead to expropriation of minority shareholders by means of investing corporate resources in projects that maximise majority shareholders’ interests. The ownership structure of listed firms in China is dominated by the state and legal-person shares. Inside ownership is still a new concept and accounts for a negligible fraction of the total outstanding shares in listed firms. The implications of these ownership structures in the context of market reaction to M&A announcements are discussed in the following paragraphs.

2.6.1.1 State ownership

State ownership relates to equity in a listed firm that is owned and managed directly or indirectly by the state. Although the proportion of firms having the state as their major or controlling shareholder in China has declined, from about 97% in 1997 (J. Y. Lin, Cai, &

Li, 2001) to about 75% in 2003 (OECD, 2005) and 60% in 2007 (Liebman & Milhaupt, 2008), it still remains significant. As at mid-2010, the top ten state-owned firms made up almost 40% of the Shanghai stock exchange market capitalisation (William & Shen, 2013). Therefore, the state still plays a decisive role in the Chinese economy. The influence of state ownership on firm performance and value has been widely discussed in finance literature mainly from the agency theory perspective.

Shareholdings by the majority and participating shareholders or institutional investors such as state ownership can provide an incentive for diligent monitoring (Agrawal & Knoeber, 2012). Thus, majority and participating shareholders are motivated to address the agency problem as they both have a long-term interest in the continuing survival of the firm and enough control over the assets of the firm to have their interest respected (Shome & Singh, 1995). Many scholars argue that such shareholder activism reduces managerial entrenchment (e.g. see, La Porta et al., 1999; La Porta et al., 2000). In this case, the minority shareholders tend to enjoy the benefits of close monitoring by large shareholders through “*free riding*”. Thus, dominant shareholders have strong incentives to monitor managers to ensure that they engage in M&A that benefit all shareholders.

Conversely, dominant large shareholdings in the form of state ownership may not be desirable. First, when ownership structure in bidder firms is concentrated, conflict of interest between managers and shareholders is replaced by concerns over how dominant shareholders may use M&A to expropriate minority shareholders (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002). Also, dominant shareholders may engage in M&A to maximise their personal interests as they are able to make strategic decisions without significant opposition from minority shareholders especially when investor protection is weak (Bae et al., 2002). Second, state ownership may limit top management positions to affiliated members instead of hiring qualified outside professional managers (Hess, Gunasekarage, & Hovey, 2010; Yen & Andre, 2007). Third, state ownership may also prevent additional monitoring of managers by the markets, which is available under diffuse ownership with the high liquidity of shares (Holmstrom & Tirole, 1993). Last but no means least, the state as a dominant shareholder is associated with political costs due to its preference for social and political goals as opposed to value maximisation (Hess et al., 2010; Huyghebaert & Wang, 2010).

In China context, empirical studies have been conducted examining the influence of state ownership on firm performance and value, and the findings are mixed. On one hand, there are those that report negative relationship between state ownership and firm performance (e.g. see, Bai, Liu, Lu, Song, & Zhang, 2004; Q. Chen, Goldstein, & Jiang, 2007; Qi, Wu, & Zhang, 2000; Sun & Tong, 2003). On the other hand, there are those that find a positive relation between state ownership and firm value (Calomiris, Fisman, & Wang, 2010).

However, there is limited literature on the influence of state ownership on M&A performance (Zhou et al., 2012). Due to the unique characteristics of the Chinese market, M&A decisions are influenced by the state intervention either as a regulator or shareholder. In addition to maximising shareholder wealth, M&A may be influenced by the state to achieve social, welfare and political goals. Some of the limited existing literature seems to suggest that state ownership is associated with a positive impact on mergers and acquisition performance. G. Chen, Firth, and Xu (2009) findings support (Stiglitz, 1999) results that market-oriented state shareholders may be the most suitable controlling owners of firms in countries with weak institutional environments. Similarly, Sun, Tong, and Tong (2002) argue that state ownership has positive impacts such as positive signalling, effective monitoring of management and providing business connections. On the contrary, the study by Chi et al. (2011) suggests that state ownership is not necessarily associated with negative bidder returns. In an examination of the role of state ownership in M&A by analysing the short-term and long-term performance of Chinese state-owned enterprise (SOE) bidders relative to privately owned enterprise (POE) peers from 1994 to 2008, Zhou et al. (2012) find that SOEs outperform POEs in terms of long-term stock performance. The results suggest that the gains from government intervention outweigh the inefficiency of state ownership in China's M&A.

The reasons for firms in which the state own shares make profitable M&A deals are better summed up by Chi et al. (2011) and Zhou et al. (2012). First, such bidder firms can organise favourable deals through their connections in government. Second, they enjoy favourable financial support, such as privileged bank loans and government subsidies. Third, in a mixed economy such as China, SOEs may dominate the M&A market competition against other firms through government intervention as a regulator (F. Wang, Geng, & Qian, 2011).

2.6.1.2 Legal-person ownership

Legal-person ownership relates to equity in a firm that is owned and managed by institutions such as pension funds and insurance firms. While state ownership has declined over the years, the relative participation of private owned enterprises has been growing, particularly after the introduction of the share reforms in 2005. Legal-person ownership is the second largest shareholder in Chinese listed firms. This group of shareholders tend to be economically motivated, unlike the state which must juggle between social and political, and economic goals. Legal-person shareholders have a relatively large part of cash flow rights, which gives them more incentive and interest in monitoring and controlling managers which equate them to institutional ownership in developed economies (Tan, 2002). In general, a legal-person has a close relationship with management and have access to corporate inside information (X. Xu & Wang, 1999). This helps reduce information asymmetry and ensure better monitoring of management.

Studies on institutional or legal-person ownership structure and M&A performance in China are still limited and mixed. Using a Chinese sample, Berkman, Cole, and Fu (2012) find a positive effect on abnormal returns around the announcement of block share transfer from state to private person entities indicating that investors recognise that legal-person ownership is a better corporate governance mechanism than state ownership. However, Chi et al. (2011) in a study of 1,148 acquisitions between 1998 and 2003 find a negative and significant relationship between legal-person ownership and bidder announcement returns. They conclude that bidder firms that have a legal-person as the controlling owner might not be able to perform in the same way as state-owned firms during M&A due to the poor management skill and lack of experience that are common among Chinese listed companies.

Institutional ownership has been associated with good management in developed economies. A study of the US firms by McConnell and Servaes (1990) find that the level of institutional ownership is positively related to firm performance proxied by Tobin's q. In M&A context, Bruner (1999) finds a positive relation between institutional activism and bidder returns in the once proposed merger between Volvo and Renault in 1993. In a study of the US sample, Wright et al. (2002) find a positive effect of institutional ownership on value creation by bidder firms. Using a sample of 238 Canadian acquisitions over the period 1998-2000 Ben-Amar and Andre (2006), report a significant positive association between

largest institutional ownership bidder announcement returns. Jong et al. (2007), examine 865 acquisitions by Dutch industrial firms over the period 1993–2004 and find a positive relationship between block holders and bidder announcement returns. In a study of 1,249 successful US acquisitions between 1994 and 2005, Bauguess and Stegemoller (2008) also document a positive outside block ownership impact on bidder announcement returns. Similarly, Ahn et al. (2010) in a study of 1207 US acquisitions between 1985 and 1996 find a statistically significant positive relationship between institutional ownership and bidder announcement returns. Cosh et al. (2006) in a study of 363 UK acquisitions between 1985 and 2003 find a positive correlation between largest institutional ownership and bidder announcement returns in the long-term. These findings conclude that institutional ownership may provide incentives and power to monitor the management.

Conversely, there are other studies that record negative relationships between institutional ownership and bidder announcement returns. In an earlier study by Sudarsanam et al. (1996) of 429, UK acquisitions find a significant negative relationship between largest shareholder and bidder CAR around announcement date. Recently, Masulis et al. (2007) in a study of 1,646 US acquisitions between 1990 and 2003 find a negative largest institutional ownership effect on bidder cumulative abnormal returns but not statistically significant.

2.6.1.3 Executive ownership

Managerial ownership is considered one of the most important bonding mechanisms that reward agents for achieving principals' goals. Managerial ownership incentives such as equity ownership and stock options play an important role in mitigating agency costs associated with M&A (Hagendorff et al., 2007). This is because “as ownership incentives rise, the financial interests of managers and shareholders will begin to converge” (Wright et al., 2002, p. 42). According to this convergence of interest hypothesis, firm performance improves with management ownership (Morck, Shleifer, & Vishny, 1988). Conversely, as management ownership increases, managers become less afraid of dismissal and so become more entrenched (Agrawal & Knoeber, 2012). This entrenchment hypothesis predicts that firm performance up to a certain level of managerial ownership starts decreasing.

There are no direct studies on inside ownership and abnormal returns from China. However, though there are many studies that have researched the impact of managerial ownership on firm performance in China, the results have not been conclusive. On one hand, there are studies that find that management ownership of shares in a firm may act as an effective

governance mechanism for mitigating tunnelling activities, although the economic significance is small (for example, Gao & Kling, 2008). In support, J. Chen (2001) and D. H. Li, Moshirian, Nguyen, and Tan (2005) report a positive relationship between managerial shareholding and firm performance which is in line with (Jensen & Meckling, 1976) assertion. Conversely, Gul and Zhao (2001) find that managerial shareholding has no significant positive impact on listed firms' performance. Also, Firth, Fung, and Rui (2007) argue that managerial ownership is not likely to influence accounting quality. The limiting factor in the Chinese studies on managerial ownership is the small magnitude of managerial ownership and the close relationship between management and the state, which is the controlling shareholder in most of the listed firms (J. Yang, Chi, & Young, 2011).

Internationally, there are a number of studies that have attempted to investigate the impact of inside ownership on M&A performance outcomes for the bidder firm shareholders (Cosh et al., 2006). Most studies show evidence that there is a positive relationship between inside ownership and bidder returns. In a study of 294 US acquisitions over the period 1994-1998, Swanstrom (2006) find a positive relationship between the sensitivity of the CEO's firm-related wealth to changes in the firm's stock price and bidder returns. Similarly, Bauguess and Stegemoller (2008) using a sample of 1,249 US acquisitions over the period 1994-2005 find a positive relation between inside ownership and bidder announcement returns. Also, Datta et al. (2001) find a positive impact of shares owned by the top five executives and returns to bidding shareholders around acquisition announcements between 1993 and 1998. Ben-Amar and Andre (2006) using a sample of 327 Canadian acquisitions between 1998 and 2002 find a positive association between cash flow and voting rights held by executive directors and announcement date CAR. In a study of 324 US acquisitions between 1997 and 2001, Kroll et al. (2008) find a significant positive relation between CEO ownership and M&A performance. In an early study of 429 UK acquisitions between 1980 and 1990, Sudarsanam et al. (1996) find a positive relationship between director shareholding and bidder CAR around announcement date. These results confirm the hypothesis that managerial ownership reduces agency costs and create value for shareholders.

On the contrary, some studies provide evidence of a negative relationship. In a study of 363 UK acquisitions between 1985 and 1996, Cosh et al. (2006) find a negative relationship between the number of incentive shares owned by the CEO and bidder returns. They also find a significant negative relation with the number of incentives owned by all executive

directors excluding the CEO. In a study of 1,849 US acquisitions between 1993 and 2004, Sudarsanam and Huang (2007) also find a negative relationship between CEO ownership and short-term shareholder gains. In a recent study of 1,163 US acquisitions between 1998 and 2003 by Ahn et al. (2010) find a negative relationship between equity owned by directors and acquisitions abnormal returns. Also, Bertin, Ghazanfari, and Torabzadeh (1989) find no relation between managerial ownership and abnormal returns for a sample of 33 banks that successfully acquire failed banks. However, the small size of their sample seriously limits the power of their regressions.

2.6.2 Board structure

The board of directors of a firm is considered to be shareholders' agents that play a crucial role in providing expertise and monitoring managerial discretion (Adams & Ferreira, 2007). More specifically, boards have the authority to provide checks and balances on managerial initiatives, to assess the performance of executive management, and determine executive remuneration and career paths at a particular firm (Hagendorff et al., 2007). The board's expertise is particularly needed most in the context of large and infrequent transactions such as M&A (Hagendorff et al., 2007). To date, the relationship between board structure and company performance has been the most studied aspect of all corporate governance investigations (Adams & Ferreira, 2007; Harris & Raviv, 2008; Hermalin & Weisbach, 2003). In these studies, it is often assumed that a company's financial performance is mainly determined by board characteristics. Key board structure and composition characteristics that have been tested in prior research and are a part of this research model include board size, independent director and CEO role duality role.

2.6.2.1 Board size

Corporate board size is one of the most important board monitoring mechanisms that determine firm performance (Lipton & Lorsch, 1992). Perhaps not surprisingly, the finance and economics streams of literature are replete with work on board size. Prior studies have tried to provide a theoretical and empirical relationship between board size and firm performance with opposing theoretical views and mixed empirical results (Cheng, 2008; Coles, Daniel, & Naveen, 2008).

The agency theory posits that the smaller the board size the more effective it is at improving firm performance (Belkhir, 2009). First, the size of the board has financial costs

implications as a larger board consumes firm resources in the form of remuneration and perquisites than smaller boards. Second, Cheng (2008) argue that a large board is difficult to co-ordinate as well as easier to be controlled by a dominant CEO due to associated director shirking and free-riding thereby increasing agency problem. Finally, it is contended that smaller boards are more likely to be cohesive and to have more effective discussions (Coles et al., 2008). This is because all directors are able to candidly contribute and express their ideas and opinions within the limited time available (Lipton & Lorsch, 1992). It is worth noting that the proponents of smaller corporate boards mainly draw their inspiration from organisational theory, which posits that as groups increase in size they become less effective because the associated coordination problems tend to outweigh the benefits gained from having a larger pool of talented individuals to draw from (Hackman, 1990).

An opposing view from the resource dependence theory is that larger boards may possibly be better for corporate financial performance (Dalton, Daily, Ellstrand, & Johnson, 1998; John & Senbet, 1998; Yawson, 2006). Firstly, larger boards are associated with diversity in skills, business contacts, and experience that smaller boards may not have, which offers greater opportunity to secure critical resources (Haniffa & Hudaib, 2006). Similarly, larger boards offer greater access to their firm's external environment, which reduces uncertainties and also facilitates securing critical resources, such as finance, raw materials, and contracts (Jackling & Johl, 2009). Secondly, larger boards enhance the knowledge base on which business advice can be sought, which increases managerial ability to make important and better business decisions (Yawson, 2006). Finally, a corporate board's monitoring capacity is demonstrated to be positively related with board size (John & Senbet, 1998). This is because a larger number of people with varied expertise will be better placed to subject managerial decisions such as M&A to greater scrutiny and monitoring (Kiel & Nicholson, 2003). This will help balance the power of otherwise a dominant CEO.

While the impact of board size on acquisition decisions has been extensively researched in developed economies, there has been limited research in China. Using general corporate governance and firm performance empirical research in China, N. Liang and Li (1999) and L. Li and Naughton (2007), find that board size has no effect on firm performance. This may be explained by the fact that when it became a requirement that two-thirds of board members must be independent, firms simply added more directors to the already existing numbers. Thus, the board size variable is no longer distinguishable to investors. Another

explanation is that most of the Chinese listed firms are large-sized former SOEs involved in energy, resources and other key industries (Liao et al., 2009). These large-sized listed firms in China need more advice and expertise, compared with small firms (Liao et al., 2009) and as a result, have larger boards which according to Yermack (1996) have no relationship with performance.

Board size and its impact on bidder announcement have been widely studied especially in the US, UK and Canada. However, empirical evidence regarding the association between board size and M&A performance is conflicting. On one hand, there are studies that provide evidence that the increase in board size should enhance its expertise, counterbalance the CEO's dominance of the board and enhance board effectiveness Chi et al. (2011). Using a sample of 294 US acquisitions successfully completed between 1994 and 1998, Swanstrom (2006) finds a statistically significant positive relationship between board size and abnormal returns. Also, Bauguess and Stegemoller (2008) find a significant positive relationship between board size and bidder announcement returns using a US sample of 498 firms between 1994 and 2005. Studying a relatively large sample of 1,719 US acquisitions between 1998 and 2003, Ahn et al. (2010) find a positive association between board size and bidder returns. Using samples from the US, Levi et al. (2008) and Kroll et al. (2008) find a positive correlation between board size and bidder announcement returns. The above findings suggest that a larger board does a better job of monitoring firm managers in acquisition decisions which lend support to the resource dependency theory.

On the other hand, there are studies that provide evidence that larger boards may encounter communication and coordination problems that reduce their effectiveness. In a study of 1 649 US acquisitions between 1990 and 2003, Masulis et al. (2007) find a negative correlation between board size and bidder announcement returns. In a study of 363 UK acquisitions between 1985 and 1996, Cosh et al. (2006) find that board size has a statistically insignificant negative effect on announcement returns. In a study of Canadian acquisitions, Ben-Amar and Andre (2006) also document a negative relationship between board size and bidder firm CAR around the announcement date.

2.6.2.2 Independent director

One of the internal corporate governance mechanism that the theoretical literature suggests can be used in reducing agency and information asymmetry problems in modern corporations are the appointment of independent directors. There are two theoretical views

with regards to independent directors: those in favour of more outside or independent directors and those in favour of more inside or executive directors.

Those who are in favour of more independent directors on corporate boards base their arguments on three theories: agency, resource dependence, and information asymmetry and signalling. Conventional agency theory suggests that boards dominated by independent directors are more accountable (Sonnenfeld, 2002). Independent directors bring independent judgment to board decisions and reduce connivance and collusion among executive directors to expropriate shareholders' wealth (Fama & Jensen, 1983). The resource dependency theory suggests that independent directors offer the firm resources in the form of experience, expertise, business contacts and reputation (Baranchuk & Dybvig, 2009). Finally, it has been argued that the appointment of independent directors helps in reducing information asymmetry by credibly signalling insiders' intent to treat outside or potential shareholders fairly, and by implication, the safety of their investment (B. S. Black, Jang, & Kim, 2006). It also signals to the market insiders' intent to rely on decision experts, as well as their appreciation of the importance of separating the decision-making and control functions (Fama & Jensen, 1983). Thus, proponents of this view believe that a higher percentage of independent directors on corporate boards will improve financial performance.

Those who are in favour of more inside or executive directors base their arguments on stewardship theory. Stewardship theorists argue that corporate boards dominated by independent directors may impact negatively on performance (Bozec, 2005; Weir & Laing, 2000). Independent directors often command less knowledge about the business and find it too difficult to understand the complexities of the company (Weir & Laing, 2000). This problem is exacerbated by the fact that outside directors are usually part-timers who normally also sit on boards of other companies (Bozec, 2005; Jiraporn, Singh, & Lee, 2009). This leaves them with too little time to devote to their monitoring and advisory duties. Therefore, decisions made by a board dominated by independent directors would be of a lower quality, and would, in turn, lead to low firm performance. Further, it has been argued that corporate boards dominated by outside directors tend to stifle managerial initiative and strategic actions, which arise from excessive managerial supervision (Haniffa & Hudaib, 2006, p. 1039).

Empirically, very few studies have directly examined the relationship between the presence of outside directors and the shareholder wealth effects on managerial decisions. Studies examining the role of independent boards on value creation in the case of M&A are generally mixed (Chi et al., 2011). In China context, most studies report a positive relationship between independent directors and firm performance. N. Liang and Li (1999), find that outside directors are positively associated with high returns on investments. Similarly, G. Chen, Firth, Gao, and Rui (2006) find that firms with a high proportion of external directors experience less fraud. Also, S. Ma and Tian (2009) find a positive and significant relationship between independent directors and firm performance. However, the results of these studies are often overshadowed by the concerns on how independent are the independent directors in China. The appointment of independent directors is usually done as a window dressing exercise in order to comply with the law (Huyghebaert & Wang, 2010). The firm boards lack independence as most independent directors are nominated by controlling shareholders and therefore do not represent interests of the minority shareholders. This is supported by 24% of respondents in a corporate governance survey of listed firms in China by Deloitte (2010), who agree that a majority shareholder was affecting the ability of the board to function effectively. The report recommends that the abilities and background of board members need upgrading. Again, Kakabadse et al. (2010) conclude that the independent director system is weak as a result of the concentrated ownership structure, unique business culture, intervention of controlling shareholders and the lack of understanding of the benefits brought by independent directors. F. Jiang and Kim (2015) point out that the role of independent directors in China is different from their Western counterparts. Their specific role is to monitor large shareholders on behalf of minority shareholders given highly concentrated ownership of listed firms in China. And, because the large shareholders know this, they keep their numbers on boards to the minimum required by legislation. So, they do not do much to monitor them.

Internationally, research evidence is mixed. On one hand, there are studies that provide evidence that independent directors enhance board effectiveness and a board dominated by independent directors make decisions that create shareholder value. For a sample of 1,646 US firms that successful acquisitions during 1990 and 2003, Masulis et al. (2007) find a marginally positive relation between bidder announcement abnormal returns and independent board. Using a sample of 324 US acquisitions of publicly traded firms made

by other publicly traded firms for each of the years 1997 through 2001, Kroll et al. (2008) find a significant positive association between bidder announcement returns and independent directors. They conclude that independent directors do not only monitor managerial decisions but also provide advisory services for specific events such as M&A. An earlier study by Byrd and Hickman (1992) finds a positive relationship between the percentage of independent directors on a board and announcement period returns. This testifies to the beneficial impact of a robust corporate governance structure.

On the other hand, other studies report a negative relationship between independent boards and shareholder abnormal returns. Swanstrom (2006), finds a negative but insignificant relationship between outside directors on the board and abnormal returns of 294 US acquisitions occurring from 1994 through 1998. Aware that the result is different from some previous studies, the author suggests that this might be due to the use of different sample data sources and a greater proportion of 'new-economy' firms. Similarly, Cosh et al. (2006) find that the proportion of non-executives has an insignificantly negative impact on announcement returns in a study of 363 domestic acquisitions made by UK public firms between 1985 and 1996. Also, Levi et al. (2008) in a study of 442 M&A announced in the period 1997-2007 find a significant negative relationship between the ratio of independent directors on bidder's board and shareholder abnormal returns.

2.6.2.3 CEO role duality

Another board structure variable that has the potential of increasing or reducing the agency problem is CEO role duality. CEO role duality is a contentious issue that has attracted significant public and academic scrutiny. It refers to a board leadership structure in which one person undertakes the combined roles of chief executive officer and chairperson of the board.

There are three theoretical propositions regarding CEO role duality which are stewardship, resource dependence, and agency theories. Stewardship and resource dependence theories suggest that role duality can have a positive impact on performance. First, as an insider, the CEO tends to have greater knowledge, understanding and experience of the strategic challenges and opportunities, which the company faces than a non-executive chairperson (Weir *et al.*, 2002). Second, it has been argued that role duality grants a charismatic CEO an opportunity to have a sharper focus on firm objectives (Haniffa & Hudaib, 2006). This implies a visionary CEO will have the chance to shape the long-term fortunes of a firm with

minimum board interference (Haniffa & Cooke, 2002). This may lead to improved performance due to the rapid management decision-making that arises from the provision of clear and unambiguous corporate leadership (Haniffa & Hudaib, 2006). Third, CEO role duality avoids extra compensation to the chair, which can result in a reduction in managerial remuneration (Vafeas & Theodorou, 1998). Finally, it is argued that the unified firm leadership associated with role duality improves managerial accountability as it makes it easier to charge the blame for poor performance (Bozec, 2005).

Conversely, agency theory suggests that CEO role duality can impact negatively on firm performance by compromising the board's effectiveness in monitoring the CEO (Jensen, 1993). Agency theorists argue that separating the two roles will help increase board independence by providing effective checks and balances over managerial behaviour (e.g. see, Adams, Almeida, & Ferreira, 2005; Haniffa & Cooke, 2002; Kroll et al., 2008). Prior evidence suggests that separation of the CEO and Chairperson roles will make it easier for the board to remove a non-performing CEO (Monks & Minow, 2004). This can help in preventing managers from pursuing goals that advance their self-interests to the disadvantage of shareholders. The agency theorists see a conflict of interest if the CEO, who manages the day-to-day operations of the firm, is also the Chair of the board, who is supposed to oversee the CEO on shareholders' behalf.

There are a relatively small number of empirical studies that have examined the impact of CEO role duality on M&A performance and the findings are mixed. Studies in China using CEO role duality and firm performance have not produced conclusive results. In a study of 5,165 observations of Chinese listed firms over a period between 2005 and 2010, (Hu & Alon, 2014), find that empowering CEOs through the practice of CEO role duality and longer CEO tenure have a positive effect on firm value. This result suggests that CEO role duality in China improves firm performance and accountability. N. Liang and Li (1999), conclude that CEO role duality has no explanatory power on firm performance. Similarly, C. Lin, Ma, and Su (2009) report a statistically insignificant relationship between CEO role duality and firm efficiency despite the proportion of CEO role duality in listed firms has fallen down from 27.3% to 13.8% during the period 1999-2002. Further, in a study of 1,004 listed firms during the year 2000 Bai et al. (2004), report a statistically insignificant negative relationship between CEO role duality and firm valuation. These results again confirm that separating CEO and Chair roles or not do not have an impact on the reaction

of the markets to M&A announcements. However, G. Chen et al. (2006), find that CEO role duality leads to higher fraud instances. They conclude that concentration of power in one person is likely to lead them to abuse their positions and perpetrate fraudulent activities.

Internationally, the research evidence is also mixed. First, there are studies that report a weak relationship between CEO role duality and share performance on M&A announcements. Recently, Masulis et al. (2007) find a significantly negative relationship, but at only 10% levels, between CEO role duality and announcement bidder returns, suggesting that separating the positions of CEO and chairperson of the board can cause CEOs to be more selective in their acquisition decisions. This result lends support to the recent calls for the separation of CEO and chair roles.

Second, there are studies that find no statistically significant relation between CEO role duality and share price change around M&A announcement. Using a sample of 363 acquisitions of UK target firms during 1985-1996, Cosh et al. (2006) find that the relationship between CEO role duality and announcement abnormal returns is insignificantly negative. Similarly, Ahn et al. (2010) find a negative and insignificant association between CEO role duality and bidder announcement returns. Using a sample of 442 US acquisition attempts between 1997 and 2007 Levi et al. (2008), find a positive but insignificant relationship between CEO role duality and bidder announcement returns. These findings indicate that the markets react indifferently to M&A announcement by firms where the CEO is also the Chair of the board of directors.

2.7 Conclusion

The chapter reviews both theoretical and empirical literature relating to the relationship between corporate governance determinants and the performance of M&A around the announcement date. The theoretical underpinnings of the study were discussed and revealed two opposing views: managerial incentives which lead to value increasing decisions and managerial entrenchment which leads to value destroying acquisitions. The empirical literature also revealed mixed results: M&A result in gains and no gains for domestic M&A. The next chapter reviews the institutional setting in China including policy reforms that were instituted in 1978 by the Chinese Community Party. It will also review the developments that have taken place in relation to M&A and corporate governance.

Chapter 3 Chinese Institutional Setting

3.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. Since embarking on economic reform in 1978, China has seen great achievements that have left economic commentators likening her to the dragon that has finally woken from a deeper slumber. China has risen from the doldrums of communism to become the second largest economy in the world in 2010. State-owned enterprises (SOEs) have been corporatised and privatised, stock exchanges boost phenomenal increase in the number of listed firms, laws and guidelines that govern corporate and offer shareholder protection have been enacted, open door policy introduced and People's Bank of China ceased handling credit and savings business. Now that the foundation for a free market economy has been firmly laid, China must grapple with a reminiscence of communism. Political influence still means everything; boards of directors are still weak, state dual role of regulator and player, dual share structure, state dominance in listed firms and managers still lowly paid. The aim of this chapter is to present a review of the overall institutional setting in China that is, economic development, structural changes, capital markets and, the corporate law and corporate governance.

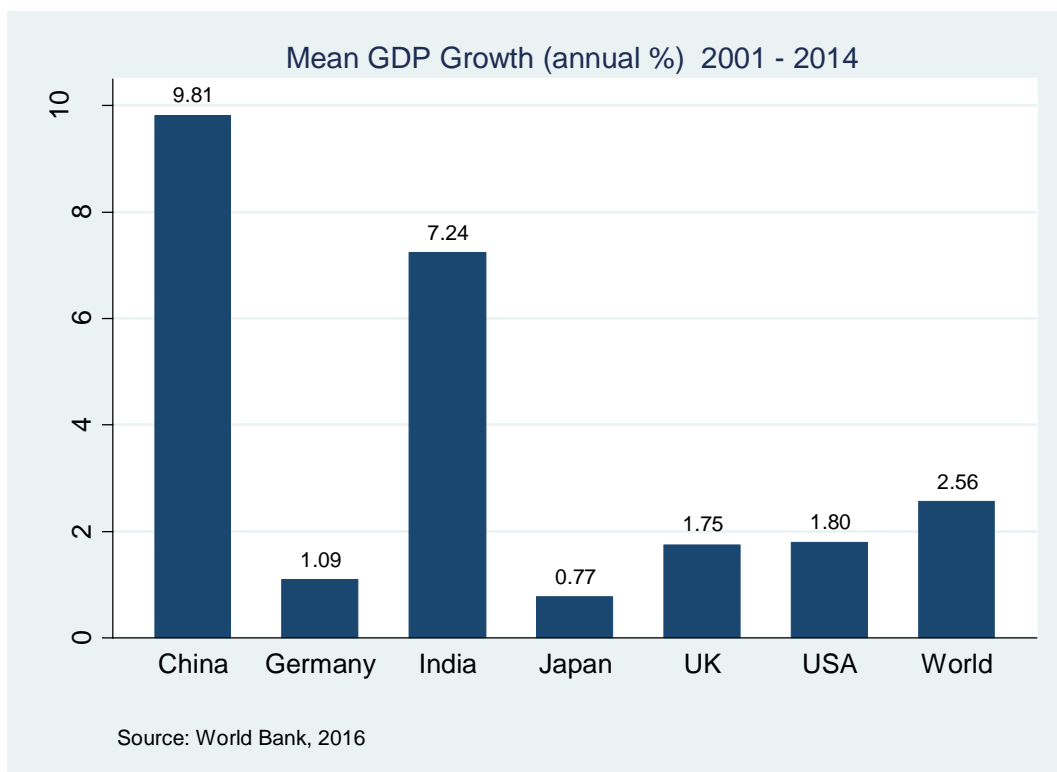
The chapter is organised into six sections as follows. Section 3.2 reviews the Chinese economic indicators up to 2014 followed by a review of the economic reform programme in section 3.3. Section 3.4 reviews the corporate governance reforms. This is followed by section 3.5 which reviews M&A activity and regulatory framework in China regarding domestic transactions. The chapter closes with an overall summary in section 3.6. The present study draws on and refers to this review in hypotheses development, research design, data analysis, conclusions and policy recommendations.

3.2 The Chinese economic overview

The Chinese economy has been experiencing an on-going expansion since embarking on an open-door policy in 1978. Economic “reform, globalisation and population growth have driven thirty-two successive years of GDP expansion, including a ten-year compounded annual growth rate of” 10.5% during the period 2001-2010 (Baird R W and Company, 2011, p. 2). China's economy is now the world's second largest after surpassing Japan in

2010 (IMF, 2011). In 2010, China recorded an income per capita of US\$7, 570 (IMF, 2011) and although it is still classified as a low middle-income economy, it has been growing at an average of 9.8% per annum during the period 2001-2014, almost three times the world rate of 2.6% (see Figure 3.1). China's output has also seen an increase in its share of global output from 5% in 1978 to 16.2% in 2010 (The Conference Board, 2011).

Figure 3.1: Average annual GDP growth 2001-2014



The above graph shows the comparative average GDP growth rates for selected countries and the world for the period 2001 to 2014. The graph clearly shows that China registered a high average rate of 9.81% followed by India with 7.24%. The GDP average growth rate of 9.81% for China is almost three times the rest of the World of 2.56%. The careful adoption of market-based reforms has been attributed the continuing double-digit growth rates in China.

The future of China looks bright with economists forecasting that its economy will grow at an average rate of 8.5% over the next ten years (2010-2020) (The Conference Board, 2011). If the Chinese economy continues to grow at these levels annually, it will overtake the US as the world's largest economy by 2040. Furthermore, the huge population of over 1.3 billion makes it the most potential market in the foreseeable future.

Despite the steady growth, there are still some fundamental weaknesses in the fiscal and national economy. The Standard and Poor's (2009) report pointed out that there is still a shortage of effective demand and an imbalanced supply structure. The economic growth seems to have benefited the urban population at the expense of the rural population, thus creating a discrepancy in living standards between rural and urban dwellers. Although the official figures on employment look somewhat impressive, there is increasing unemployment as most people are made redundant because of SOEs reforms.

3.3 The economic reform

The Peoples' Republic of China (PRC) was born in 1949 after the collapse of the Republic of China following the Chinese Civil War. The Chinese Communist Party (CCP), under the leadership of Mao Zedong, took power and introduced the soviet-style planned economy. The CCP became the “sole [political party] ... and creator of all policies and regulations” (Standard and Poor's, 2003, p. 3). The CCP launched the collectivisation and industrialisation programmes under which all agriculture and industry were to be controlled by the state. The country recorded remarkable success during the collectivisation programme (1953-1957) period but the Great Leap Forward (1958-1960) industrialisation programme was disastrous. The economy simply collapsed due to the withdrawal of Soviet support and natural disasters. The introduction of the Cultural Revolution worsened the situation and when it ended in 1976, the national economy was in limbo.

When Chairman Mao died on September 9, 1976, the new leadership of CCP gradually abandoned command economy policies and introduced market-based economic reforms. The main aim was to adopt and apply free market policies. The economic reforms through the open-door policy ushered a new era and released new energies among the Chinese people. Consequently, the reforms have brought in the latest technology and seen imports trailing exports, thus confirming China as a net exporter country.

There were three significant steps in these reforms. Firstly, State Owned Enterprises (SOEs) were privatised, corporatised and then listed on the stock exchanges (Firth, Fung, Y, & Rui, 2006). Secondly, the mono-banking system was broken down and commercial banking functions were separated from the central bank (Y. Huang, Saich, & Steinfeld, 2005). Finally, Shanghai Stock Exchange and Shenzhen Stock Exchange were established in 1990 and 1991, respectively (Ding, Wu, Li, & Jia, 2009).

3.3.1 State Owned Enterprises (SOEs) reform

Before the dawn of the economic reform era in 1978, all enterprise in China was state-owned. The firms were owned by the state on behalf of the people of China. The agency problem was between the managers and the whole populace that is ownership was highly diffused, with no direct benefits except through improvements in social welfare. Political party members were granted the mandate to monitor and align the interest of management to those of the public. However, because politicians have multiple and conflicting social objectives achieving higher social goals is prioritised at the expenses of economic efficiency (Kato & Long, 2011). The result is that performance of state-owned enterprises suffers from both political costs and agency costs. Political costs are the costs associated with control of firms by politicians who have political goals that differ from economic efficiency, while agency costs are the costs resulting from managerial pursuit of private benefits at the expense of the firm (L. C. Xu, Zhu, & Lin, 2005). The SOEs were characterised by low productivity, low profitability and high employee numbers. The state in 1978 then embarked on a reform programme to improve SOEs performance.

In its reform of the SOEs, the Chinese government “opted for a gradualist approach... by which incremental reforms begin as controlled local experiments that spread steadily to provide a substitute for central planning” (Hovey, 2004). The SOE reforms are divided into four stages: stage 1 (1978-1991), stage 2 (1992-2000), Stage 3 (2001-2005) and Stage 4 (2006-present).

3.3.1.1 Stage 1 (1978-1991)

This stage is synonymous with the privatisation of the state-owned enterprises. The first step in the reform of SOEs was to give management greater decision-making powers. Management for the first time could keep profits made over and above the state-set quota, which they could use “to re-invest in production and technical innovation, provide workers and staff with individual bonuses and collective welfare, or to use the profit to maintain a reserve fund” (China Labour Bulletin, 2007). In 1984, under the dual track system, SOEs that exceeded their production quotas, could sell their products outside the state plan at as much as 20% above the state price (China Labour Bulletin, 2007).

However, despite the top government officials backing the reforms, the reform programme had its own problems. Firstly, decision making was only for production planning and not

profitability enhancing. Secondly, the bonus system was one-sided, political and was not possible to sanction bad performers. Thirdly, the contract responsibility system (CRS) for the managers led to corruption and opportunistic behaviour between management and state authorities. The politically connected managers benefited at the expense of others. Fourthly, although the reforms resulted in some SOEs recording profits, non-profitable SOEs were still a burden to the national purse. Finally, there was an outcry which led to the SOE reform being toned down due to concerns about the social and economic impact of the reforms, such as high unemployment, increases in the cost of living, and political unrest (China Labour Bulletin, 2007).

3.3.1.2 Stage 2 (1992-2000)

This stage is synonymous with corporatisation. The second step in the SOEs reform was to introduce ownership structure. The first SOE change of ownership occurred in 1986 when three people put up 34,000 RMB as collateral to lease the Wuhan Motor Engine Factory (China Labour Bulletin, 2007). In 1990 and in 1991 respectively, the Shenzhen Stock Exchange and the Shanghai Stock Exchange opened, enabling a limited number of SOEs to issue shares to the public. By the end of 2000, about 1,200 SOEs were corporatised and listed on the two stock exchanges through initial public offerings (IPOs). The *Company Law* was introduced in 1993 and the *Securities Law* in 1998. These laws provided guidelines on corporate structure and capital markets operations.

3.3.1.3 Stage 3 (2001-2005)

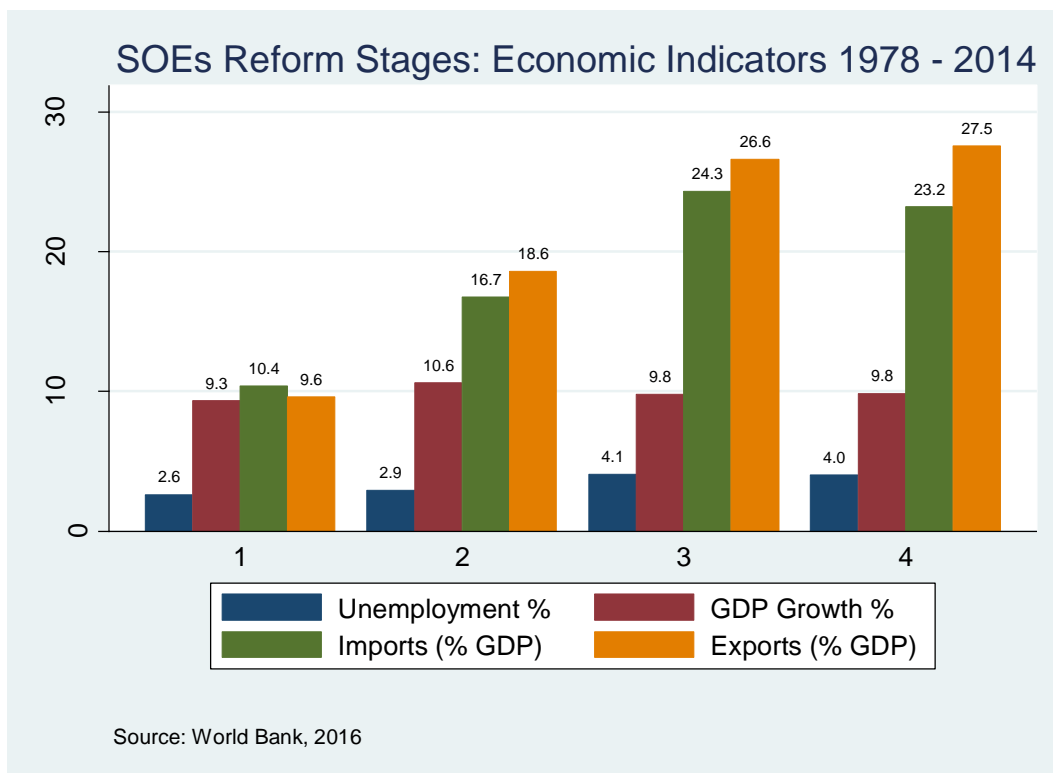
This stage is synonymous with corporate governance. The third step was to introduce some monitoring mechanisms into the newly corporatised firms and achieve its goal to become a member of the WTO. In 2001 China became a member of the WTO. The accession to the WTO, with its focus on globalisation, brought new challenges to China that needed new legislation and law enforcement. In 2001, China Securities Regulatory Commission issued the *Code*, which won accolades from foreign investors and, International Monetary Fund and the World Bank.

Although SOE reform witnessed improved economic performance, it also created some social problems. From 1998 to 2004, 60% of SOE workforce was made redundant. Also, stage 3 saw total employment in SOEs as a proportion of total employment decrease from 16% in 1994 to 8% in 2005 (China Labour Bulletin, 2007).

3.3.1.4 Stage 4 (2006-present)

This stage is synonymous with continuous improvement (*kaizen*). Although the most intensive phase of SOE reform has passed, reforms designed to improve economic performance continue. On 29 April 2005, the CSRC announced a major reform encouraging listed firms to convert non-tradable A-shares into tradable A-shares (J. Yang et al., 2011). The main aim of this reform was to reduce state role in the management of SOEs and concentrate only on provide investors with a concussive environment. The reform is also expected to improve on corporate governance. Again, by having more tradable shares in private hands would entail that management and directors will be hired based on competency rather than based on political connections. The current stage has already witnessed a GDP growth rate of 11.2% and a net export as a percentage of GDP gain of 6.1% thus confirming China as a net exporter (see Figure 3.2).

Figure 3.2: SOEs reform stages economic indicators 1978 - 2014



The graph above illustrates the trend of the economic indicators during the stages of SOEs reform. The unemployment rate remains steady at an average of 3.4% while the GDP growth rate remained high at over 10%. Exports of goods and services as a percentage of GDP continue to grow at rates higher than imports of goods and services. The outlook period looks bright with GNI per capita forecast to reach \$40 000 by 2040.

According to Y. Kang, Shi, and Brown (2008), the “final stage, from 2006 onward, has witnessed the continuing growth of corporate governance in China, including legislation aimed at balancing the power asymmetry between state shareholders and individual shareholders in companies” (p. x).

3.3.1.5 SOEs reform problems

The CFA Institute (2007) sums up the problems of the SOEs reform in China more clearly. The report concludes that, under the existing SOE system, China will face the on-going challenge of balancing between maximising shareholder wealth and social responsibility toward the larger population. It goes further to note that the sheer size of competing for social, health, and well-being issues and the desire for global competitiveness and top standing among global securities markets will create sizeable challenges for the nation.

3.3.2 Banking system reform

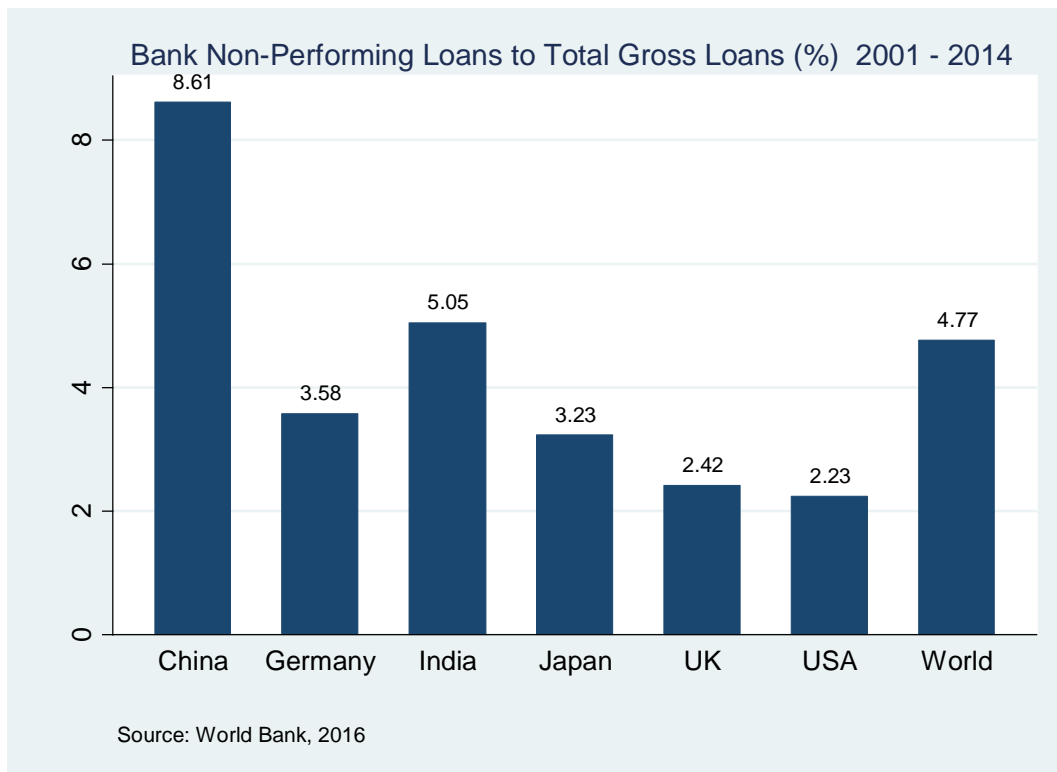
During the period 1945-1978, the banking system in China was intended to complement the state’s production plans and banks merely acted as the cashiers for the state’s economic programmes (Y. Huang et al., 2005). The banking system was one of the most highly regulated sectors in the world with the People’s Bank of China as the sole player. Serious reforms to the banking industry began in 1984 when the People’s Bank of China ceased handling credit and savings business to concentrate on macro-control and supervisory duties. The commercial banking functions were separated from the People’s Bank of China and then the mono-banking system was broken down (Y. Huang et al., 2005). In 1995, the Commercial Bank Law paved the way for the creation of a commercial banking system. The reforms were strengthened by the establishment of the China Banking Regulatory Commission in 2003 to supervise commercial banks and the opening of the sector to foreign investors in 2006.

Currently, the banking system structure in China consists of the central bank, The People’s Bank of China, three policy banks, four state-owned commercial banks and, 90 regional commercial banks, 3,000 urban and 42,000 rural credit cooperative banks (Du, Rui, Wong, & Li, 2007). According to Standard and Poor's (2003), China has one of the highest savings rate in the world equivalent to about 40% of GDP in 2002. The biggest chunk of these savings is in bank deposits with only a small proportion of equity investment. Apart from

the stock joint banks which are jointly owned by the state and private investors, the rest are directly owned by the state.

The report by Standard and Poor's (2003) notes that the four commercial and policy banks have dominated both lending and bank deposits markets. However, most of the lending has been biased towards SOEs not by mistake but by design. This lending policy has starved the productive private sector and at the same time witnessed high levels of non-performing loans. Over the period 2000-2006 China had the highest non-performing loans compared to other countries mainly due to poor internal risk control mechanisms and the SOEs financial difficulties (see Figure 3.3).

Figure 3.3: Bank non-performing loans to total gross loans (%) 2001-2014



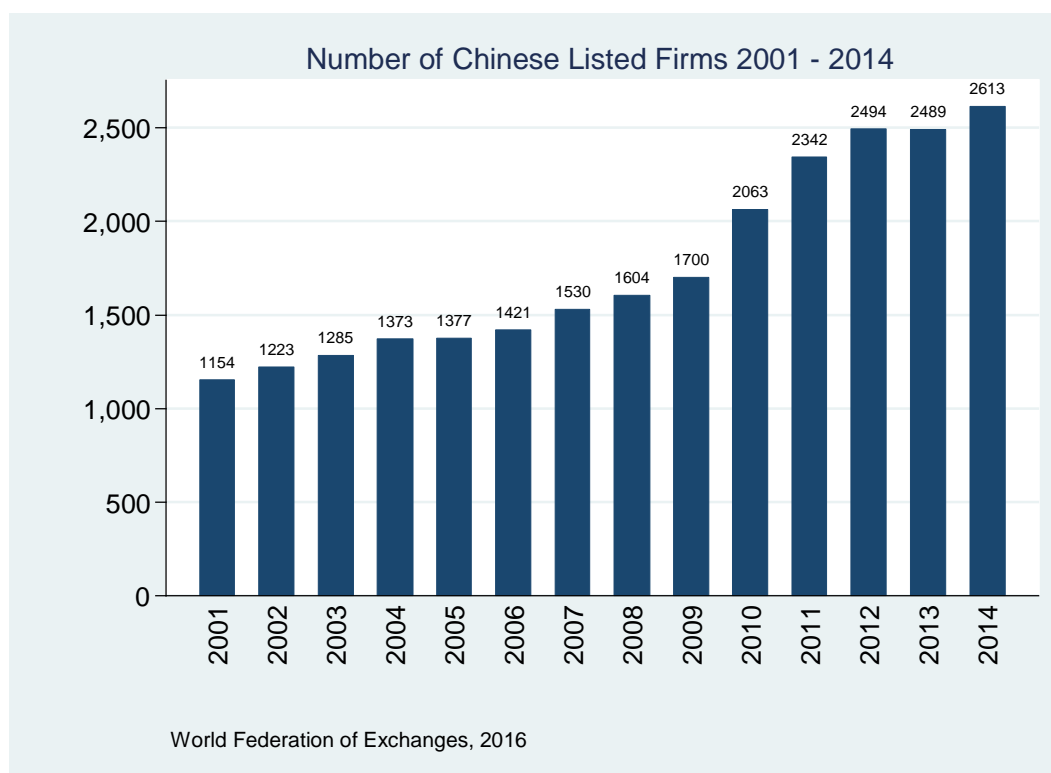
The above graph compares bank non-performance loans as a percentage of total gross loans for selected countries. The graph shows that China has a high non-performance rate of 8.61% while the US records the lowest rate of 2.23%.

3.3.3 Capital markets reform

The Chinese stock market has seen an unprecedented growth over the past two decades. Although the road to rapid stock markets development has not been smooth, they have successfully managed to overcome stumbling blocks along the way to become one of the

largest stock markets in the world. As at the end of 2014, there were 995 (646 in 2001) companies listed on Shanghai Stock Exchange, and the total market capitalisation reached US\$3.9 trillion (US\$333 billion in 2001). It was ranked in terms of market capitalisation, the fifth (13th in 2001) largest worldwide. Shenzhen Stock Exchange as at the end of 2014 listed 1,618 (508 in 2001) companies and a total market capitalization of US\$2.1 trillion (US\$192 billion in 2001). The phenomenal increase in the number of listed firms on the Shenzhen Stock Exchange was due to the introduction of Chi Next board for high-growth, high-tech firms at the end of 2009. By the end of 2014, the Shanghai and Shenzhen Stock Exchanges together had 2,613 (1,154 in 2001) listed companies, with a total market value added up to nearly US\$ 6 trillion (US\$525 billion in 2001) (see Figure 3.4 and Figure 3.5). In 2007 the two stock markets saw new capital raised from Initial Public Offering amounting to US\$63 billion which was the largest in the world (Ding et al., 2009; Jia, Ding, Li, & Wu, 2009).

Figure 3.4: Number of Chinese listed firms 2001 - 2014

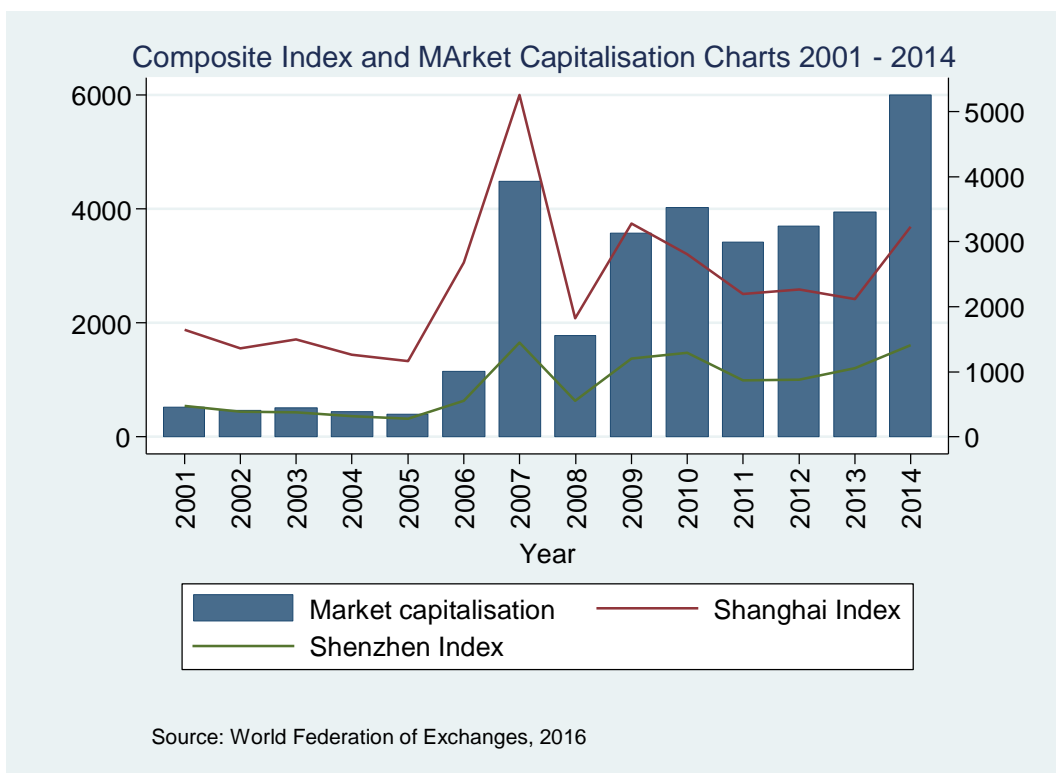


The figure above illustrates the tremendous growth in the number of listed firms in China over the period 2001 to 2014. From a humble beginning of 8 firms in 1990, the number of listed firms has gone up to 1,154 in 2001 and subsequently 2,613 firms in 2014. This is because of the privatisation of SOEs and the incorporation of private enterprises. The number of listed firms increased by a big margin in 2010 due to the introduction by Shenzhen Stock Exchange of the Chi Next board for high-tech and high-growth firms by the end of 2009.

The high figures recorded in 2007 were because of the rush for Chinese markets by investors seeking refuge from the global economic crisis. This dramatic capital market growth has received unprecedented attention from investors, academia and other transitional countries who want to take a leaf out of China's experiences. The continuous increase in the number listed firms corresponds with the increase in the number of M&A deals announced and completed in China over the same period (see also Figure 3.9).

Despite such tremendous progress significant challenges remain. Firstly, the stock market is not liquid, although the share structure reform introduced in 2005 has made about 98% of listed shares tradable (N. Liang & Useem, 2009; Q. Yang, Shi, & Yurtoglu, 2011), the state does not intend to sell the state-owned shares on the domestic capital market (Y. Huang et al., 2005). These non-tradable shares will restrict M&A of domestic firms through

Figure 3.5: Composite index and market capitalisation charts 2001 – 2014



The above graph illustrates the stock market index and market capitalisation trend over the period 2001 to 2014. To counter the slump 2005, the state suspended new IPOs and introduced the guideline to convert state-owned non-tradable shares to tradable shares. The IPOs suspension was then lifted in 2006. As the effects of the global economic crisis began to bite, speculative investors rushed for the Chinese market which recorded all-time highs. As the global economic crisis deepened the Chinese markets ended 2008 on a low note before it starts raising in 2009 and has been on the rise since then.

the stock exchanges (Q. Yang et al., 2011). Thus, China's stock markets are prevented from performing a vital function that other stock markets do perform; effecting changes in corporate controls of the listed firms. Secondly, resource allocation is still not being determined by market forces. The state still privileges SOEs at the expense of the more productive firms. Political interference remains strong with the stock market functioning as an appendage of state policy. Thirdly, the stock market listing is used as a way to help financially distressed SOEs access cheap external financing (Bai et al., 2004; Du et al., 2007) while private-owned firms face serious restrictions in gaining access to equity markets. Hence, some non-listed private-owned firms acquire block shares in listed firms as a way of circumventing restrictions in gaining access to stock markets by (Du et al., 2007).

In terms of market efficiency in allocating resources, there is no agreement on the form of efficiency. Early studies pre-share split reforms indicate that because of non-tradability of the state and legal-person shares insider trading and individual traders treating the market like a casino and not considering information or fundamentals related to firms, the markets were inefficient (Girardin & Lui, 2003; Keng et al. 2002; Ma, 1996; Nam et al. 1999). However, recent post-reform studies seem to suggest that the shares are now strongly linked to firm fundamentals and share price informativeness is now the same as in the US (Carpenter, Lu, & Whitelaw, 2017; Charles & Darke, 2009).

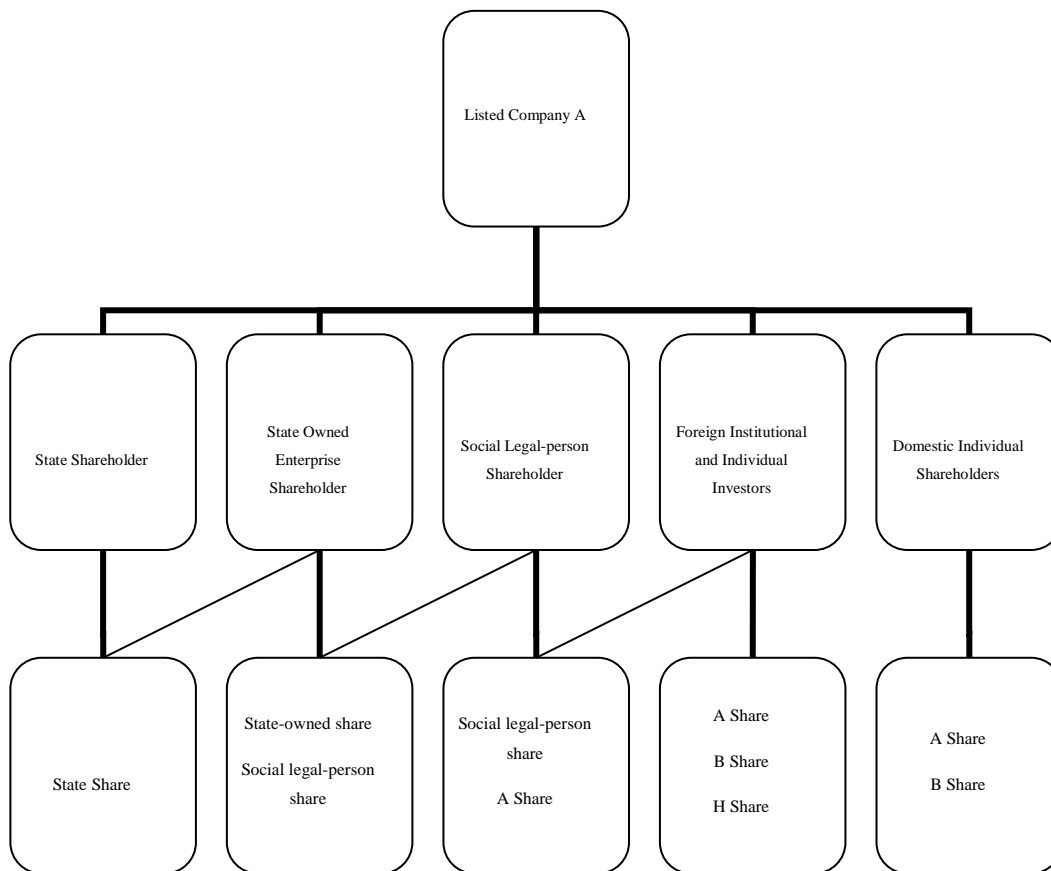
3.4 Corporate governance mechanism in China

Corporate governance in China has gone through major changes in the past thirty years. The evolution of corporate governance is closely related to the economic reforms which started in 1978. From 1945-1978, the economy was highly centralised and all enterprises were owned and controlled by the state. The open-door policy adopted in 1978 witnessed the dawn of a new era. Today, the state ownership has fallen from 100% in 1978 to 51% (Szamosszegi & Kyle, 2011) in 2009 of all listed firms outstanding shares, two stock exchanges are operational, securities policies are now in place and governing boards established. The introduction of the code of corporate governance in 2001 has strengthened investor confidence and reinforced the economic sustainability of Chinese enterprises.

3.4.1 Share ownership structure in China

When the two stock exchanges were established in the early 1990s, the Chinese government adopted a dual share structure. The shares of listed firms comprised of tradable and non-tradable shares. Tradable shares include A-shares, B-shares and H-shares while non-tradable shares include shares owned by the state and its agencies (H. Liang et al., 2016)⁷. The creation of a dual share structure was primarily to enable the government to raise capital

Figure 3.6: Chinese listed firms' ownership structure



Adapted from: Wei and Geng (2008, pp.936)

The chart above shows the ownership structure of most Chinese listed firms. The proportion of listed firms owned by the state has decreased in recent years, following the non-tradable share reform in 2005 (Q. Yang *et al.*, 2011). By the end

⁷ A-shares are shares of firms listed on Shanghai and Shenzhen Stock Exchanges. They are quoted and traded in Chinese Yuan. Initially, they were reserved for domestic investors. B-shares are shares of firms listed on Shanghai and Shenzhen Stock Exchanges. They are quoted and traded in US dollar. These were reserved for foreign investors. H-shares are shares of Chinese incorporated firms listed on the Hong-Kong and other foreign stock exchanges. They are quoted and traded in Hong-Kong dollars. From 2001, domestic investors can invest in B-shares and from 2003, foreign investors can invest in A-shares.

of 2001, the state-controlled around 80% of outstanding shares in listed firms (Qiang, 2003; Liu & Sun, 2003). By the end of 2009, the state-controlled around 50% of the shares of listed firms (Q. Yang *et al.*, 2011). Q. Yang *et al.* further report that state ownership at 50% is still very high and cause major problems which lead to a series of derivative problems in the Chinese equity market.

for the SOEs and retain control of the means of production. However, the dual share structure was a hindrance to the privatisation process and led to derivative problems in the capital markets in terms of evaluation of firm value, liquidity and agency problems. Consequently, the Chinese government introduced the share split-reforms in 2006. Under the reforms, non-tradable shareholders negotiated and compensated owners of tradable shares. This process was completed in 2011. At the time of the reforms, about two-thirds of the total outstanding shares was non-tradable and by 2011, 98% of the shares were tradable (J. Yang *et al.*, 2011).

A listed firm in China has a mixed ownership structure, with three predominant groups of shareholders; state, legal person and individuals (both domestic and foreign) (see Figure 3.6). Ownership is highly concentrated with the state and legal persons holding almost two-thirds of total outstanding shares.

3.4.2 Board structure in China

A typical Chinese listed firm has a two-tier board structure with a separate supervisory board and a board of directors. The supervisory board oversees a board of directors and has the final say on major business decisions. A third of the members of supervisory board must be employee representatives (Liang & Useem, 2009). However, since most of the members are insiders, they lack skills and the knowledge to effectively monitor the board of directors and have been heavily criticised for rubber stamping decisions of management and board of directors (Y. Kang *et al.*, 2008). “The board of directors is the *de facto* decision-making authority, and the chairman of the board is normally the most powerful person in all company decisions” (Kang *et al.* 2008, p.14). The Company Law stipulates that the number of directors to be between five and nineteen with 33% being independent directors. The *Code* also stipulates that listed firms may set up strategy, nomination, remuneration, and auditing committees which must comprise mainly of and chaired by independent directors. Although independent directors compliment the supervisory board,

it is their independence that has been questioned by several researchers (see e.g. Huyghebaert & Wang, 2010).

3.4.3 Disclosure and transparency

Article 87 of the *Code* stipulates that “A listed company shall truthfully, accurately, completely and timely disclose information as required by laws, regulations and the company's articles of association”. This affirms that the Chinese government fully understands the importance of a sound financial reporting system which can the costs of raising capital by firms and alleviate the risk a financial crisis. Further, a listed firm is obliged to disclose information regarding its corporate governance and controlling shareholders’ interests. In the spirit of the economic reforms China changed its accounting system from fund-based to accruals-based accounting and has made progress in harmonising Chinese Accounting Standards (CAS) with International Financial Reporting Standards (IFRS). These reforms have a potential to reduce discrepancies between CAS and IFRS thereby, improving quality and reliability of financial reports.

Early research documents the presence of severe information asymmetry between managers and investors due to the nature of financial reporting (Chui & Kwok, 1998; Mok & Hui, 1998). In concert with these findings a study by the Shanghai Stock Exchange in 2003 note that “distortion of accounting information is quite common”. However, recent studies document that the harmonisation of the CAS with IFRS has reduced information asymmetry (C. W. Lee, 2001; Wu, Boateng, & Drury, 2007). However, some researchers have argued that the presence of standards and regulations alone does not mean that managerial behavioural change (Piotroski & Wong, 2012). They recommend that disclosure and transparency should be judged by practices and outcome.

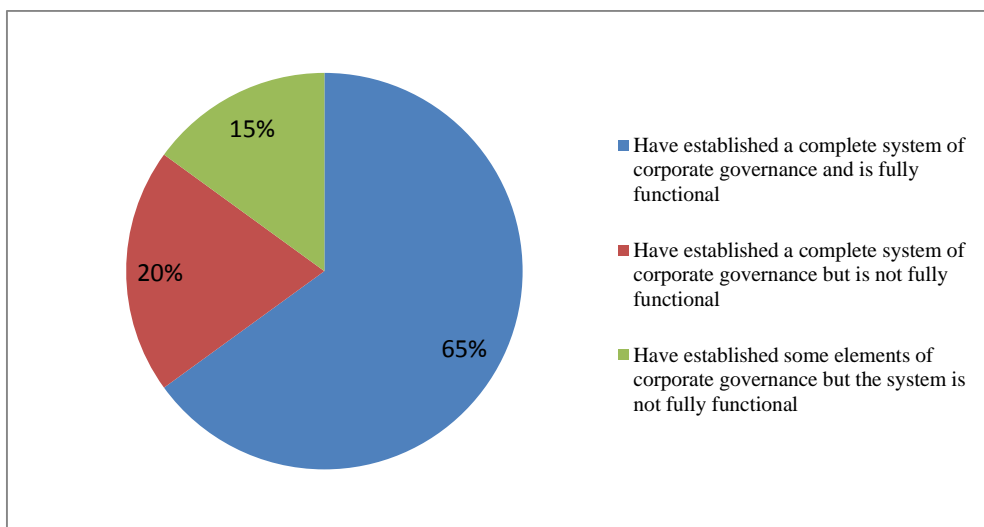
3.4.4 Level of corporate governance implementation

The Chinese authorities got accolades from the World Bank and International Monetary Fund for a job well done in adopting good governance practices. In a survey of about 80 listed firms from China, Canada’s Centre for International Innovation (2006) rated China first out of ten Asian economies in adopting the OECD governance principles and ninth on actual governance practices (N. Liang & Useem, 2009). Another report by the Institute of International Finance (IIF) in 2006, “confirms that, while China’s overall corporate governance framework now complies with roughly two-thirds of guidelines prescribed in

the IIF's Code, up from about one-half two years ago, corporate governance as practiced in most Chinese firms has considerable room for improvement" (IIF, 2006, p. 2).

More recently, in a survey of about 100 listed firms in China, Deloitte (2010) report that 65% of respondents have established a complete system of corporate governance and is functioning well. About 35% have either established a complete corporate governance system or some elements but the system is not fully functioning. Although the survey reports some improvements in actual governance practices, it shows that there is room for improvement (see Figure 3.7).

Figure 3.7: Corporate governance level of implementation



Source: Deloitte, 2010

The pie chart above shows the corporate governance level of implementation. It shows that 85% of surveyed listed firms have established corporate governance systems and is either fully functional or not fully functional. 15% have not fully established corporate governance mechanisms but have implemented some elements of corporate governance, and the system is not functional.

3.4.5 Unique characteristics of Chinese corporate governance

The testimonies above point to the fantastic effort that the Chinese government is putting in ensuring the corporate governance practices are in line with international best practice. However, there remain some characteristics of the corporate arena that is peculiar to the Chinese economy that it needs to resolve to achieve world class governance. Chinese listed firms have six unique characteristics that distinguish them from those of developed countries and stimulate a lot of interest from researchers and indeed other economies around the world.

3.4.5.1 Highly concentrated ownership

Firstly, ownership is highly concentrated. Most firms have a large and controlling shareholder which has substantial power over the firm. The controlling shareholder has either direct or indirect relationship with the government and/or the government related agencies. G. Chen et al. (2009), find that at the end of 2004, the median of first largest shareholder holding is 42.6%, only 5% for the second largest shareholders and a mere 1.9% for the third largest shareholders. In 2008, of the 1,604 listed firms on Shanghai and Shenzhen Stock Exchanges, the top 5 shareholders controlled about 51% of the total outstanding share (N. Liang & Useem, 2009). By the end of 2012, ownership structure had not changed much with single largest shareholders owning 36.8% of listed firms' shareholding and top 5 shareholders owning 53.2% of shares in listed firms (F. Jiang & Kim, 2015). High concentrated ownership leads to the agency problem between controlling and minority shareholders. The state as the controlling shareholder may impair the rights of minority shareholders in its corporate governance arrangements. The decisions of management and board of directors will represent the interests of controlling and large shareholders who appointed them. This can easily lead to tunnelling of resources at the expense of small shareholders.

There is a very small presence of private investors. Managerial and employee ownership and foreign non-institutional investors are limited in listed firms. As at the end of 2004, management, foreign and employee share ownership represented less than 2% of listed firms' outstanding shares (G. Chen et al., 2009). By 2012, the private investors' ownership had shown some improvement due to the share reforms introduced in 2005, although in SOEs it is still negligible at less than 1% while top managers in private owned firms own over 16.6% of outstanding shares (F. Jiang & Kim, 2015).

3.4.5.2 Strong state ownership

Secondly, there is a strong state ownership. The state either directly or indirectly through state agencies controls about two-thirds on shares of listed firms. In 2007, the state-owned or state-controlled enterprises accounted for 31% of the GDP. In the same year, the Shanghai Stock Exchange reported that the state held about 51% of listed firms outstanding shares (N. Liang & Useem, 2009). Strong state ownership may lead to super-weak monitoring phenomenon.

The study by Graf, Masound, Lust, and Liang (1990) notice that the management mechanism for state enterprises in China is very hierarchical, ranging from the State, the China State-owned Assets Management Bureaucracy down to the Local State-owned Assets Management Bureaucracy. Although the latter is responsible for the appointment of managers working in those enterprises, it has difficulties in monitoring the performance of thousands of SOEs. Therefore “it is very difficult for the firms to seriously care about keeping and increasing the value of state-owned assets because they do not hold the absolute ownership of these assets” (D. Wei & Geng, 2008, p. 940). In other words according to D. Wei and Geng (2008), there is an *absence phenomenon* in agents of state ownership. Thus, they cannot effectively supervise and motivate directors and managers of listed companies.

3.4.5.3 Pyramid ownership

Thirdly, the ownership structure in Chinese listed firms is in the form of pyramid holdings primarily held by the state in one form or the other (Hovey, 2004; Kakabadse et al., 2010). According to G. S. Liu and Sun (2003) survey, the government ultimately controls about 84% of public listed SOEs, 8.5% directly and 75.5% indirectly, by pyramid shareholding schemes (Kakabadse et al., 2010).

Cross ownership of firms is very common in China. Listed firms are owned by unlisted firms and listed firms in turn controlling other listed firms. This cross-ownership can also easily lead to tunnelling. A study carried out by the Shanghai Stock Exchange in 2006 reported that tunnelling practices had become widespread to the extent that of the 1,377 firms studied, 35% had misappropriated to their parent companies’ funds totalling RMB48 billion. This lead to the Chinese state to include pyramid misappropriations to its criminal code in 2006.

3.4.5.4 Weak market for corporate control

Fourthly, there is a weak market for corporate control. The market for corporate control is virtually non-existent in China mainly due to high concentrated ownership and state ownership with large blocks of non-tradable shares, combined with inadequate information disclosure, regulatory barriers and inexperienced management (T. W. Lin, 2004). Whereas under diffused ownership, shareholders are only interested in maximising value, under the concentrated ownership and state ownership, the shareholder is interested in maximising

value as well as social welfare. Managers are therefore not incentivised enough to maximise value but to carry out the decisions of the controlling shareholders. Cross-shareholding or the pyramid ownership also means that discipline of managers by the capital markets rarely occurs.

The board of directors' responsibility is to monitor and advise the CEO and top executives. The main concern raised has been that the board of directors works with managers more closely in the firm's day-to-day operations which compromise on the board effectiveness (CFA Institute, 2007). Effective January 2007, the *Guideline on Establishment of Independent Director System in Listed Companies* requires that independent directors have at least one-third of the seats on the board. However, Huyghebaert and Wang (2010) conclude that the appointment of independent directors is done only as a window dressing exercise in order to comply with the law. The firm boards lack independence as most independent directors are nominated by controlling shareholders and therefore do not represent interests of the minority shareholders. This is supported by 24% of respondents in a corporate governance survey of listed firms in China by Deloitte (2010), who agree that a majority shareholder was affecting the ability of the board to function effectively.

3.4.5.5 Low executive compensation

Finally, generally executive compensation in China is lower than those from the developed countries and as is expected executive compensation in state-owned firms is lower than those from privately-owned firms (N. Liang & Useem, 2009). Another feature is that although executive compensation has risen significantly in the last decade, it is still dominated by a fixed salary rather than varying with performance (N. Liang & Useem, 2009). The use of stock options is limited to 1% of the firm's shares for top executives⁸. Also, CFA Institute (2007) also reports that most of the listed firms in China prefer cash compensation to stock options

Executive compensation went through a reform in line with the economic and SOEs reforms. Before the dawn of the economic reforms in 1978, the government-controlled the SOEs. Executives were rewarded not according to performance but other factors such as

⁸ In 2006, the CSRC gave its blessing for the use of share options but limited to no more than 1% of a company's shares can be used as options for the top executive, and no more than 10% for any of its executives (Liang and Useem, 2009).

the region where the firm is located, the industry of the firm, the level of management of incumbent, their job title, their seniority and size of firm (Kato & Long, 2006). At that time China implemented a universal compensation scheme (Ding et al., 2009). SOEs were required to surrender all profits made to the state and could not retain anything for a rainy day. There were no incentive schemes to motivate the executives, nor could the executives share any of the profits generated by the enterprises (Kato & Long, 2006).

During *Stage 1* of the SOEs reforms, “profit retention and profit sharing schemes” were introduced (Firth et al., 2006, p. 696). SOEs were allowed to keep a portion of profits made, which could be used to increase the compensation of their executives and employees (Ding et al., 2009). In addition, managers were given powers to make decisions. Also, a yearly salary system was introduced which was broken down into two components that are, a fixed component paid monthly and a variable component paid annually based on the performance of the firm (Kato & Long, 2006). In their study of executive compensation in China-listed firms for the period 1995 through to 1999, D. Liu and Otsuka (2004), find that more than 80% of the firms had implemented the incentive pay system.

According to the CSRC regulations, both the salary and bonus components of executive compensation are required to be reported in the firms’ financial statements. However, reporting the two components separately is not a requirement. The challenge researchers face in studying executive compensation in China is that there is very little information disclosure about the stock options granted to the executives (Firth et al., 2006).

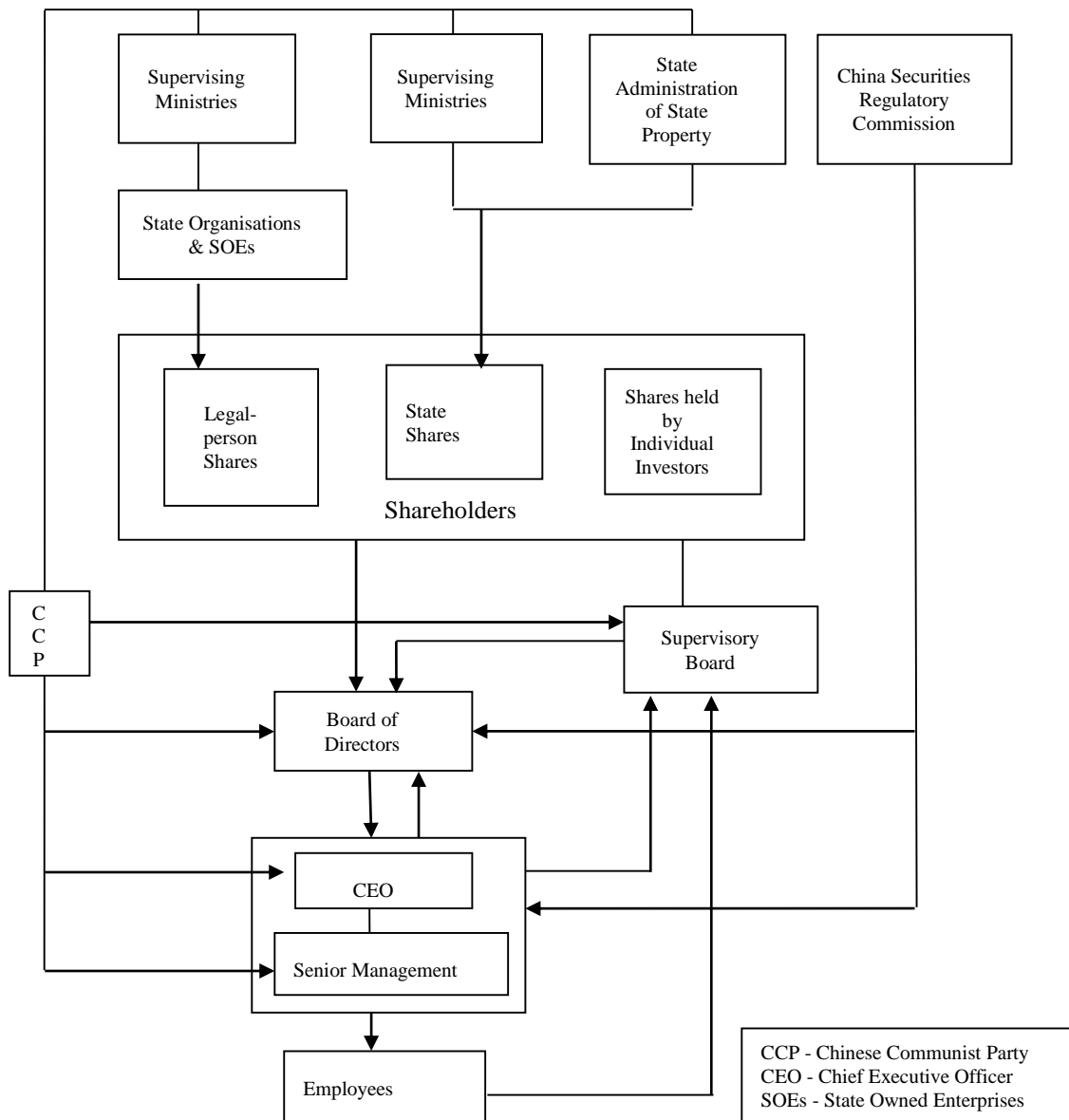
3.4.5.6 Political connections

The background of many listed firms in China has led to a lot of research on the effect of political connections on corporate governance and firm performance. Most of the listed firms were once owned and controlled by the state, and then later listed with the state holding a majority shareholding. Also, most of the firms’ senior managers come from state-owned enterprises and almost two-thirds of the directors are directly and indirectly appointed by the state. Political connection effects on firm performance have also been studied in other economies especially in China where it is more pronounced than in more developed economies.

Prior studies from transitional countries have shown that politically connected firms enjoy extensive benefits and generally gain from such political ties (Bunkanwanicha &

Wiwattanakantang, 2009; Faccio, 2006; Khwaja & Mian, 2005; La Porta et al., 1999; La Porta et al., 2000). Politically connected firms enjoy lower tax rates and greater market share than the ones without connections (Khwaja & Mian, 2005), have a significantly higher likelihood of getting bailouts when they encounter financial distress (Faccio, McConnell, & Stolin, 2006) and can lobby the state for favourable policies and regulations to keep away competition and maintain status quo (Bunkanwanicha & Wiwattanakantang, 2009).

Figure 3.8: Legal framework of corporate governance in China



Adapted from Tam (2000, p.54)

The benefits accruing from political connections positively influence firm performance. This increase in firm performance appears to be more significant when the political ties established by the businessperson are stronger, for example being elected as the head of government (Faccio, 2006).

In China context, Fan, Wong, and Zhang (2007) find that political connections negatively influence Chinese firm's long-term performance. Their study is based on a sample of 790 IPO companies over the period 1993 to 2001. They find that the CEO's political connection leads to more government officials and fewer numbers of professionals on the board. This interesting finding is attributed to the unique political background and economic environment of China.

3.4.6 Legal framework of corporate governance in China

Like in many other countries there are many structures both inside and outside firms that play a crucial role in shaping the behaviour and governance of Chinese firms (see Figure 3.8). Internal monitoring structure includes shareholders' annual and extraordinary general meetings, the board of directors (Tam, 2000). In this group is included management, who are engaged in operating the companies and are directly responsible for their governance. External monitoring structure is composed of regulators mainly the China Securities Regulatory Commission (CSRC), the Shanghai and Shenzhen Stock Exchanges, the Chinese legal system, the auditing system, and institutional investors (Tam, 2000). These players have a significant impact on companies' corporate governance, but they mainly do this through regulation, codes of conduct, certification of financial reports, and legal enforcement. Besides these institutional pillars, there are other agents who may also affect corporate governance (Tam, 2000). This group include such stakeholder as consumers, suppliers, employees, media, and non-governmental organisations.

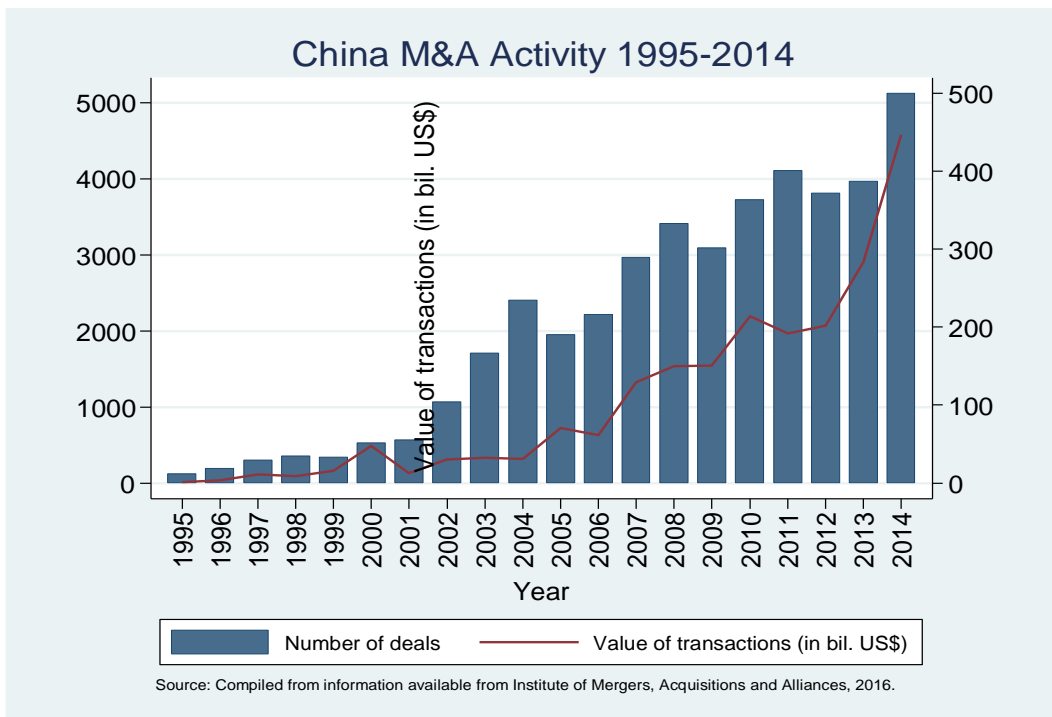
3.5 M&A in China

3.5.1 Overview of M&A activity

M&A activity has witnessed unprecedented growth in China since the establishment of the Shanghai and Shenzhen Stock Exchanges in 1990 (CSRC, 2007) and the promulgation of the Company Law Act in 1993. Since 1995 M&A activity has been increasing at phenomenal rates. M&A activity in terms of the number of transactions increased from 520

to 5, 122⁹ (see Figure 3.9). The value of these transactions has increased from US\$1.1 billion in 1995 to US\$446.8 billion in 2014. This level of growth largely reflects healthy economic growth rates in double digit figures and a relatively large appetite of bidders due motivated by economic reforms. Interestingly, both the number and value of M&A transactions have witnessed unprecedented growth from 2007 when the rest of the world was suffering from the effects of the economic meltdown.

Figure 3.9: Chinese M&A Activity 1995-2014



The figure above shows that over the last decade China has witnessed unprecedented growth in M&A, in terms of both the number of deals and value of transactions. The numbers moved from 1,032 in 2001 to 5,233 by 2014. The value of the announced deals also shows an increase from a low of US\$30.4 billion recorded in 2002 to a high of US\$446.8 billion in 2014. An interesting observation from the figure above is the strong M&A activity during the economic crisis period 2007-2009.

The fast growth in M&A in China is attributed to two main reasons: economic reforms and China’s admission to the World Trade Organisation (WTO). The economic reforms, which started in 1978, have led to rapid and robust economic growth, which led to increased M&A. The Chinese government has encouraged M&A to reduce their debt burden of SOEs on the national purse and open traditionally restricted industries. China’s admission to the

⁹ This data was sourced from the Institute for Mergers, Acquisitions and Alliances (IMAA) database, 2016.

WTO in 2002 has opened doors to foreign investment in various industrial sectors, which has also led to increased M&A activities. Most of the firms in China have turned to M&A as a vehicle to finance their businesses, as they restructure to meet the challenges of WTO and increased competition.

In China, M&A deals take several forms. They may take the form of either purchase of equity or assets of an existing company, shares swaps, mergers of two or more business entities by way of cash or shares, or a combination of any of the above three. The design and choice of payment have a significant impact on shareholders' value (T. Li & Xu, 2010). In China, most of M&A transactions are in form of cash (T. Li & Xu, 2010; Z. Ning, 2009). Statistics from the CSMAR database for the successful M&A deals between 1998 and 2009 show that 91% were paid for by cash, 3% stock, assets 1% and with others accounting for 5%. During the same period, equity transfers dominated M&A transactions, accounting for 74.7% of M&A business in China while asset transfers represent 23.6% and tender offer and debt restructuring representing 1.8%

Historically, most of M&A activities in China occur in the agreed acquisition form, which means that the bidder takes over the target firm by negotiating with the shareholders outside the stock exchange. Most of the negotiated share transfers were for non-tradable shares (C. K. Choi, Du, & Rui, 2007; Rui, 2009; Tuan, Zhang, Hsu, & Zhang, 2007). Bidder firms made mostly private tender offers to the shareholders of non-tradable shares with the intention to gain control of the target. The majority of the negotiated transfers led to target firms' non-tradable shares being purchased at lower prices due to the illiquidity discount (J. Zhang & Wang, 2006). The other mode of acquisition is a tender offer, which is not popular in China. This method has not been used much in China because, compared to negotiated acquisition, is more complicated and costly to the bidder firm. During the period 1998 and 2009, there were only 36 tender offer acquisitions involving 25 listed firms, compared to 27,134 negotiated acquisitions involving 12,403 listed firms¹⁰.

To date, M&A activity has been concentrated in the manufacturing sector, but as China continues with its economic reforms, M&A activity is expected to become more widespread. Per the CSMAR database, manufacturing industry constitutes about 48% of

¹⁰ CSMAR China listed firm's M&A, asset restructuring research database: User guide, 2010

total M&A deals announced between 1998 and 2010 with real estate industry following with 10%. However, despite rapid growth in recent years, the market in China is still in its infancy and it is likely to take more time for M&A activities to scale-up and become more effective.

3.5.2 The legal framework for M&A

To manage M&A activity, China has introduced a number of important regulations over the years to streamline the acquisition process and to address national and global M&A practice developments, including perceived practice abuses, which continues to evolve rapidly (Webre, 2006). The main legislation underpinning M&A involving listed firms is the *Company Law* and the *Securities Law*, both of which were revised in 2006. In addition, the *Administrative Rules on Takeovers of Listed Companies* and the *Administrative Measures for the Issuance of Securities by Listed Companies* are applicable to acquisitions of shares of listed companies. The *Administrative Measures on Strategic Investment in Listed Companies by Foreign Investors* and the *Regulations Concerning M&A of Domestic Enterprises by Foreign Investors* are special legislations applicable to foreign investors intending to acquire shares of a company listed on a stock exchange. China has also promulgated its first *Anti-Monopoly Law*, which became effective in August of 2008, and is now being tested in practice.

Further to the above, there are various governmental authorities, including the State Council, the China Securities Regulatory Commission, the State-owned Assets Supervision and Administration Commission and the State Administration for Industry and Commerce, involved in the approval of public M&A. In addition, if foreign investment is involved in a public M&A, approval from the Ministry of Commerce and the State Administration of Foreign Exchange is also required.

3.5.3 M&A issues and problems

Though Chinese law is becoming more flexible, however, due to the complexity of the rules and regulations governing M&A activities in China, there is an additional complication in examining M&A strategies in China relative the developed capital markets.

Firstly, there is a high-level participation of state agencies. “Different agencies have different concerns and agendas, and the approval of one agency may have little bearing on another agency’s approval. Social concerns may also have a significant impact. Obtaining

approvals costs significant amounts of time and effort, and even after approvals are obtained, various registrations are still required” (Rui, 2009, p. 6). Secondly, there is no uniformity in the regulations, each region or agency has its own regulations. Thirdly, there is no unified code on M&A. Fourthly, compared with M&A deals in the developed countries, deals in China take more time, are complex and fail more frequently. Each merger and acquisition transaction, whether be it an SOE asset purchase or equity purchase, will have its own unique set of circumstances. The regulations have been issued in piecemeal over the years and as a result, a patchwork of laws and regulations apply to each transaction, largely dependent on the type of target entity involved (Rui, 2009).

Fifthly, the M&A activity is politically rather than economically motivated. The player and regulator dual roles that the state plays mean that effectively, M&A activity is controlled by the state (Q. Liu & Lu, 2007). To free central government from the burden of supporting loss-making SOEs, the central government encouraged acquisition of these firms by well-performing firms. In some cases, the central government literally forced well-performing firms to acquire financially distressed firms to improve their performance and save jobs. In addition, local government authorities in a bid to increase their political influence and improve the performance of their administrative region, facilitate M&A among firms (S. Li et al., 2011). It has been empirically proved that such practices harm the interests of minority shareholders and use tunnelling activities to divert funds from listed firms to political activities (Gao & Kling, 2008).

The challenges facing the Chinese domestic M&A can be summed up as lack of transparency, complex interlocking debt and equity relationships among parent firms and their subsidiaries, and the increased volatility in public stock markets for the listed firms that are involved in M&A transactions (Woodard & Wang, 2004).

3.6 Conclusion

This chapter discusses the overall institutional setting in China. It highlighted that once China started implementing the economic reforms it has never looked back. Although there is now light at the end of the tunnel, the journey has never been so smooth, neither is the journey ahead. China has achieved consistent growth rates since embarking on the economic reforms. It has been admitted to the World Trade Organisation and is now the second largest economy from the US. However, the regulatory framework, both for

corporate governance and, M&A need to fully comply with the principles of a free market, which is envisaged in the Chinese economic reform policies. The next chapter will use the theoretical and empirical literature review and the institutional setting in China review to develop Research Questions for the study and hypotheses for the dependent, independent and control variables used in this study. The next chapter will also develop the research framework for the study.

Chapter 4 Hypotheses Development

4.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. This chapter draws on literature review and institutional set-up in China to develop Research Questions and testable hypotheses of the relationship between specific internal corporate governance mechanisms and domestic M&A performance. To achieve the aims of the study, two questions were developed that look at M&A wealth effects and the influence of internal corporate governance mechanisms on bidder returns. The two Research Questions are then subdivided into eight testable hypotheses. These hypotheses test the effect of individual variables on bidder returns.

The chapter is organised as follows: In section 4.2 the two Research Questions of this study are developed. In section 4.3, the Research Questions subdivided into eight testable hypotheses are developed. In section 4.4 the research framework for the study is developed. Section 4.5 concludes the chapter with a summary and a pointer to the next chapter.

4.2 Development of the Research Questions

Following the introduction of economic reforms in 1978, China has witnessed rapid and steady economic growth. This inevitably resulted in the rationalisation and the need for resources including the corporate capital. After the establishment of the Shanghai and Shenzhen Stock Exchanges in the early, 1990s, the Chinese government encouraged M&A to reduce the national debt burden of state-owned enterprises (SOEs) and to open traditionally restricted industries, making them more competitive. Despite the late development of M&A activity, M&A have been and continue growing at phenomenal rates since its introduction in 1993. Per the CSMAR database, from the year 2001 to 2014, China's M&A activity grew by 462.20% in terms of the number of transactions and 116.30% in terms of the value of the transactions. As the world's second largest economy celebrates an unprecedented growth in M&A activity, it is important of find out whether M&A create or destroy value for the shareholders. Recent studies document value-creation for the bidding firm's shareholder around announcement date (Chi et al., 2011; L. Huang, 2010b; S. Li et al., 2011; Z. Ning, 2009; Shen, 2008). However, the picture is not so clear for long-term studies. Boateng and Bi (2013), Chi et al. (2011) and Zhou et al. (2012)

document value-creation post-acquisition. A more recent study by E. L. Black et al. (2013) report value-destroying post-acquisitions. This leads to the following Research Question, in both short-term and long-term:

Research Question 1: *Are M&A associated with value creation in China?*

While M&A take place for economic reasons that intend to increase shareholder wealth, practically many reduce shareholder wealth (King, Dalton, Daily, & Covin, 2004; Tuch & O'Sullivan, 2007). One explanation is that ineffective corporate governance mechanisms to monitor and control managerial behaviour, result in managers engaging in wealth reducing M&A. In concert with this explanation, the Chinese government introduced the Code of Corporate Governance (2001) in line with international best governance practice. This has strengthened investor confidence and reinforced the economic sustainability of Chinese enterprises. Despite accolades from the World Bank and International Monetary Fund, serious problems still exist in various aspects of Chinese institutions and practices (Y. Huang et al., 2005). A study conducted by the Canada's Centre for International Governance Innovation in 2006 rate China first out of ten Asian economies in adopting the OECD governance principles (Liang & Useem, 2009). However, the study rated China ninth of ten on the actual governance practices. Ownership of listed firms is still overwhelmingly dominated by state ownership. This problem evolved from the planned economy principles and is set to improve because of the on-going share reform. Another problem is the immaturity of the market economy, including the absence of corporate debt market. This problem may remain unchanged for the foreseeable future. As the impact of these reforms continues, it is of paramount importance to understand the impact of corporate governance on shareholder value in a Chinese setting.

Though some studies on China exist (Chi et al., 2011; Pukthuanthong-Le & Visaltanachoti, 2009b) none of them has studied the effect of corporate governance on both short-term and long-term abnormal returns. In this study, we use corporate governance variables unique to China; state ownership and legal person ownership and board structure variables derived from prior studies from other countries; board size, independent directors and CEO role duality. This leads to the following Research Question, in both short-term and long-term:

Research Question 2: *What are the effects of corporate governance on bidder returns in China?*

4.3 Development of hypotheses

In section 4.2, the Research Questions were formulated based on the previously described literature review, which conclusions permit the identification of variables that influence shareholder wealth effects around and following M&A announcement. In this section, research hypotheses tested in this study are presented, underlying their association with the Research Questions. Each hypothesis will be introduced through a brief literature review then highlight the theoretical underpinnings and institutional set-up we rely on while developing these hypotheses. The hypotheses are divided into three groups namely the bidder returns, ownership structure and board structure.

4.3.1 Bidder returns

Following the introduction of economic reforms in 1978, China has witnessed rapid and steady economic growth. This inevitably resulted in the rationalisation and the need for resources including the capital. The Chinese government encouraged M&A to reduce the national debt burden of state-owned enterprises (SOEs) and to open traditionally restricted industries making them more competitive. Despite the late development of M&A activity, M&A have been and continue growing at phenomenal rates since its introduction in 1993. According to the CSMAR database, from the year 2001 to 2014, China's M&A activity grew by 462.20% in terms of the number of transactions and 116.30% in terms of the value of the transactions. However, the M&A activity is politically rather than economically motivated. The player and regulator dual roles that the state plays mean that effectively, M&A activity is controlled by the state (Q. Liu & Lu, 2007).

M&A in China seem not to follow the neoclassical theoretical propositions. First, the agency theory and its suppositions of efficient market and managers acting rationally seem not apply to the Chinese institutional setting. Despite recent studies concluding that Chinese A-shares are efficient and that the stock prices informativeness is the same as in the US (Carpenter et al., 2017; Charles & Darke, 2009; Q. Chen et al., 2007), managerial skills and M&A experience are still lacking. Further, M&A activity is mainly a result of national policy with the state encouraging firms to acquire small mainly privately owned firms and SOEs in financial distress, to consolidate fragmented industries, reduce the drain on the national purse and improve international competitiveness (J. Chen & Huici, 2008).

Consequently, the value paid for by bidder firms may not reflect the true value of the target firm because of the difficulty in valuing private firms and financially distressed firms.

Conversely, the propositions of the behavioural theories do apply in China. The behaviour of Chinese managers is quite different from their Western countries counterparts. Chinese managers are mainly measured on social and political performance rather than economic performance. Consequently, they look for political gains rather than shareholder wealth maximisation. In addition, there is no close monitoring of the managers and therefore M&A are motivated by empire building and social status enhancement.

4.3.1.1 Bidder returns in the short-term

In China context, evidence from the recent available literature suggests that M&A create value for bidder firm shareholders (see e.g. E. L. Black et al., 2013; Chi et al., 2011; S. Li & Chen, 2002; X. Song et al., 2008). They attribute the positive gains to the state intervention in the process and the private firm liquidity discount as well as the benefits of political connectedness. Target firms who are mainly privately owned, financially distressed and small are usually coerced into accepting lower bidder valuations of their firms. Bidder firms are mainly large and powerful listed firms with state majority shareholding. However, earlier research suggests that M&A in China do not create value for bidder firm shareholders due to failure by bidder firms to undertake due diligence of the target as the state, through local governments, has even gone to the extent of forcing listed firms to acquire bankrupt SOEs (X. Zhang, 2003).

Empirical evidence from advanced economies on whether bidder firm shareholders gain or lose value as a result of M&A announcement is also not clear. Some studies suggest that M&A do not create value for bidder firm shareholders due to overestimation of the target's value and overbidding when several bidders are competing for the target giving the target more bargaining power (see e.g. Bauguess & Stegemoller, 2008; Byrd & Hickman, 1992; Cosh et al., 2006; Petitt & Ferris, 2013; Swanstrom, 2006). Other studies find slightly positive abnormal returns to bidders as a result of undertaking a thorough due diligence of the target (see e.g. Ben-Amar & Andre, 2006; Datta et al., 2001; Jong et al., 2007; Masulis et al., 2007).

Given that the Chinese government is still heavily involved in the M&A process as both player and regulator, we hypothesise in its null form, that:

H1.1: Bidder returns around M&A announcement date (short-term) are positive.

4.3.1.2 Bidder returns in the long-term

The few existing studies on long-term M&A wealth effects in China seem to be mixed. Some studies find that managers make M&A decisions that increase shareholder value (see e.g. Boateng & Bi, 2013; Chi et al., 2011; Zhou et al., 2012). The political connectedness of SOEs to the state through the appointment of managers and directors, as well as being the regulator, enable them to obtain lucrative deals at no premium. Also, value creation in the long-term may be the result of low M&A competition (there is usually one bidder for a target).

However, other studies find that bidders lose value following the announcement (E. L. Black et al., 2013; Boateng & Bi, 2013). This may be a result of the markets adjusting their positions with ‘new’ information on the actual performance of the merged firms. In addition, research has suggested that fund-seeking acquirers in China either take funds away from the target company or misuse them resulting in poor performance post-acquisition (Rui, 2009). Further, existing evidence shows that in transitional economies, bidder firms have good pre-acquisition operating performance, but adjusted post-acquisition performance does not significantly improve (Yen, Chou, & Andre, 2013).

Recent research studies from advanced economies on stock performance following M&A announcement record either insignificant or negative abnormal returns in the long-term for bidders (Tuch & O'Sullivan, 2007). There are no agreed explanations for the negative abnormal returns in the long-term. Jensen and Ruback (1983), reiterate that the “explanation of these post-event negative abnormal returns is currently an unsettled issue” (p. 22). Their study shows that bidders obtain negative abnormal returns a result shared by Agrawal and Jaffe (2000)¹¹. The overwhelming consensus is that shareholders in bidding companies suffer significant wealth losses when long-run returns are considered (Bouwman et al., 2009; Dutta & Jog, 2009; Sudarsanam & Mahate, 2006; Tuch & O'Sullivan, 2007).

¹¹ For a complete list of the studies see Table 1 from Agrawal and Jaffe (2000: p. 10)

Given the evidence from Rui (2009) and advanced economies that bidders lose value in the long-term, it seems reasonable, in spite of the mixed Chinese findings, to hypothesise in its null form, that:

H1.2: Bidder returns following M&A announcement (long-term) are negative.

4.3.2 Ownership structure

In 2001, the Chinese government introduced the Code of Corporate Governance (Code) in line with international best governance practice as part of its ongoing economic reforms. This has strengthened investor confidence and reinforced the economic sustainability of Chinese enterprises. Despite winning accolades from the World Bank (WB) and the International Monetary Fund (IMF) for adopting good corporate governance principles, there is still considerable room for improvement (IIF, 2006). Despite the fantastic effort that the Chinese government is putting in ensuring the corporate governance practices are in line with international best practice, there remain some characteristics of the corporate arena that is peculiar to the Chinese economy that it needs to resolve to achieve world class governance.

Ownership of listed firms poses the biggest challenge in China. Ownership is highly concentrated with strong state ownership. Institutional (legal-person), foreign and individual investors including executive ownership are still very small although increasing due to the share split reforms introduced in 2005. According to the agency theory, high concentrated ownership may help to reduce an inherent conflict of interest (principal-agent problem) characterised by a potential misalignment of interests where managers may pursue self-interests instead of shareholder value maximisation through close monitoring of managers (Jensen & Meckling, 1976). However, in China, the highly concentrated ownership structure of listed firms poses another agency problem. In such firms, the agency problem between managers and owners is replaced by the agency problem between majority and minority owners (principal-principal problem) which may lead to expropriation of minority owners (Villalonga & Amit, 2006; Young et al., 2008).

Different ownership identity influences corporate policies and decision making to protect their interests through their control over boards and voting rights. Ownership identities used by the present study in relation to the Chinese institutional setting are state ownership, legal-person ownership and executive ownership. These will now be discussed below.

4.3.2.1 State ownership

Previous research highlights the importance of the ownership structure in determining bidder returns around M&A announcement (Shim & Okamuro, 2011). Specifically, Megginson and Netter (2001) note that state ownership has an impact on firm performance, especially in emerging and transitional economies. The association between state ownership and investment decisions is generally not sufficiently explored in China.

Of the limited literature available on the effects of state ownership on abnormal returns, empirical results are not conclusive. On one hand, there are studies that support state ownership. This strand of empirical literature documents that market-oriented state shareholders may be the most suitable controlling owners of firms in countries with weak institutional environments (G. Chen et al., 2009; Stiglitz, 1999). If state ownership is market-oriented, it is perceived by markets as the only shareholder able to effectively monitor management (Sun et al., 2002). In addition, firms with state ownership are usually large, powerful and provide better business and political connections thereby securing better M&A deals (Chi et al., 2011; Pukthuanthong-Le & Visaltanachoti, 2009b). Similarly, other studies find that state-owned enterprise (SOE) bidders outperform privately owned enterprise (POE) peers in terms of long-term stock performance (Zhou et al., 2012). These results suggest that the gains from government intervention outweigh the inefficiency of state ownership in Chinese M&A.

On the other hand, there are studies that criticise state ownership of firms because of political intervention and the need to help achieve government objectives instead of profitability (see e.g. K. Li, Yue, & Zhao, 2009; Sun & Tong, 2003; Z. Wei, Xie, & Zhang, 2005). Also, state-owned firm managers may care more about their personal benefits at the expense of the firm.

Given that managers of firms with state ownership are interested in pursuing M&A for personal benefit and social interests of the government, we hypothesise in its null form, that:

H2.1: There is a negative relationship between state ownership and bidder returns.

4.3.2.2 Legal-person ownership

The second largest group of dominant owners in China is the legal-person, whose shares are owned by legal entities or another company or institution with a legal entity status.

Legal-person ownership is a unique type of ownership in China and is of interest in that it combines the characteristics of both institutional investor and state ownership. This group of shareholders have a relatively large part of cash flow rights, which gives them more incentive and interest in monitoring and controlling managers (Tan, 2002). They have a close relationship with management and access to corporate inside information which helps reduce information asymmetry and ensure better monitoring of management (X. Xu & Wang, 1999).

Empirical evidence on the impact of legal-person ownership on M&A announcement is very thin in China. In China context, findings from the available literature indicate that announcements by firms with high legal-person ownership destroy bidder firm shareholder value (Chi et al., 2011). The result may indicate poor management skills and lack of M&A experience. However, studies on corporate governance and general firm performance indicate that legal-person ownership is associated with high firm profitability (Sun et al., 2002; X. Xu & Wang, 1999).

Previous research evidence from developed economies on the effect of legal-person ownership and bidder returns is mixed. There are studies that suggest that firms with high institutional ownership are associated with high abnormal returns as they are more likely to be active in the governance of a firm (Ahn et al., 2010). There are also studies that report that passive institutional shareholders are associated with wealth destruction as they leave everything to management who may be driven by utility maximisation (Cosh et al., 2006).

Given the evidence that firms with legal-person ownership lack appropriate M&A skills and experience, business and political connections, it seems reasonable, to hypothesise in its null form, that:

H2.2: There is a negative relationship between legal-person ownership and bidder returns.

4.3.2.3 Executive ownership

Executive ownership is considered one of the most important bonding mechanisms that reward agents for achieving principals' goals. Incentives such as equity ownership and stock options play an important role in mitigating agency costs associated with M&A (Hagendorff et al., 2007). Research evidence highlights that share ownership by managers may be an important mechanism for aligning the interests of management with those of shareholders (Brewer III, Jackson, & Jagtiani, 2010).

A small number of studies have investigated the impact of managerial ownership on firm performance in China but no studies directly related to M&A are available. Studies that investigate managerial ownership and firm performance find that management ownership in a firm may act as an effective governance mechanism for mitigating tunnelling activities (J. Chen, 2001; Gao & Kling, 2008; D. H. Li et al., 2005).

Research evidence from advanced economies highlights that share ownership by managers may be an important mechanism for aligning the interests of management with those of shareholders (Brewer III et al., 2010). There is evidence to suggest that managerial ownership is associated with value creating decisions reflecting greater incentives for managers to maximise value as their stakes rise (see e.g. Bauguess & Stegemoller, 2008; Ben-Amar & Andre, 2006; Cosh et al., 2006; Datta et al., 2001).

Drawing on governance-performance studies from China and advanced economies evidence above, it seems reasonable, to hypothesise in its null form, that:

H2.3: There is a positive relationship between executive ownership and bidder returns.

4.3.3 Board structure

The influence of board structure and composition on specific decisions such as acquisitions is an important field of study that has attracted much attention. The board of directors, appointed by shareholders, has a fiduciary responsibility to represent shareholders by monitoring management and providing resources (Swanstrom, 2006).

The CSRC *Code of Corporate Governance for Listed Companies in China* simply states that the number of directors and the structure of the board should comply with laws and regulations. A plausible explanation for not prescribing a specific board number is to avoid a tacit conclusion that it is possible to adopt a “*one size fits all*” approach to corporate management (Liao et al., 2009; MacNeil & Li, 2006, p. 486). However, the *Companies Law of the People’s Republic of China (2005)* is more specific and requires that the board of directors be composed of not fewer than 5 but not more than 19 members. The *Code of Corporate Governance of Listed Firms* requires that at least one-third of directors be independent, supporting the hypothesis that independent directors effectively monitor managers. Further, the *Code* is conspicuously silent on whether the CEO should or should not be appointed as the board Chair. Firms can therefore either combine or split the two senior tops. However, Chinese firms have been voluntarily separating the two with the

number of those practising duality decreasing from approximately 60% in the early 1990s to approximately 30% by the end of the 1990s (Peng et al., 2007a).

Below we review the literature on specific board structure and composition variables in relation to M&A announcements and where no direct studies are available, hypotheses are drawn from the *Code* is conspicuously silent on whether the CEO should or should not be appointed as the board Chair. Firms can therefore either combine or split the two senior tops. However, Chinese firms have been voluntarily separating the two with the number of those practising duality decreasing from approximately 60% in the early 1990s to approximately 30% by the end of the 1990s (Peng et al., 2007a).

4.3.3.1 Board size

There are no direct studies on corporate governance-bidder returns relationship in China. Using general corporate governance and firm performance empirical research in China, N. Liang and Li (1999) and L. Li and Naughton (2007), find that board size has no effect on firm performance. This may be explained by the fact that when it became a requirement that one-third of board members must be independent, firms simply added more directors to the already existing numbers without considering the skills they bring to the board. Another explanation is that most of the Chinese listed firms are large former SOEs involved in energy, resources and other key industries (Liao et al., 2009). These large firms, therefore, need large boards which according to Yermack (1996) have no relationship with performance.

Empirical evidence from developed markets investigating effects of board size on bidder return is mixed and inconclusive reflecting contrasting theories (see e.g. Ahn et al., 2010; Bauguess & Stegemoller, 2008; Cosh et al., 2006; Kroll et al., 2008; Levi et al., 2008; Masulis et al., 2007; Swanstrom, 2006). The contradictory evidence suggests that the direction and extent of the relationship are uncertain. More so, the relationship between board size and performance may differ not just by deal-specific characteristics but also by legal and national institutional characteristics (Guest, 2009).

Given dependency theory propositions and the complex nature of Chinese firms which calls for more directors on their boards, we hypothesise in its null form, that:

H3.1: There is a positive relationship between board size and bidder returns.

4.3.3.2 Independent directors

Existing research highlights that the presence of independent directors on the board of directors plays an important role in monitoring managers' decision-making process (Fama & Jensen, 1983). There are no direct studies on China M&A activity and corporate governance. Evidence from corporate governance and firm performance studies is mixed (W. Wang, 2014; J. Yang et al., 2011). Fan et al. (2007) find that independent directors play an important role in monitoring CEOs while Qiu and Yao (2009) find that they do not necessarily lead to high profitability because they are not independent themselves.

Prior research evidence from developed economies investigating the effects of independent directors on bidder returns is mixed. Some studies find that tender offer bidders are best served when outside representation is close to 60% of the board (Byrd & Hickman, 1992; Kroll et al., 2008; Masulis et al., 2007). Kroll et al. (2008), state that independent directors do not only monitor managerial decisions but also provide advisory services for specific events such as M&A. Other studies, Cosh et al. (2006) and Levi et al. (2008) find that the presence of independent directors on boards does not lead to value creating decisions, casting doubts on the independence of the independent directors.

Given the evidence above and requirements of the Code, it seems reasonable, despite the mixed results, to hypothesise in its null form, that:

H3.2: There is a positive relationship between independent directors and bidder returns.

4.3.3.3 CEO role duality

The concentration of power held by a Chief Executive Officer (CEO) who also serves as chairperson of the board has been criticised as it may compromise board independence and increase the agency problem (Demsetz, 1983). Conversely, However, CEO role duality may enhance effectiveness and produces superior returns to shareholders (Donaldson & Davis, 1991).

There is relatively a small number of empirical studies that have examined the impact of CEO role duality on M&A performance and the findings are inconclusive. There are studies find that CEO role duality is associated with value destroying M&A decisions suggesting that separating the positions can cause CEOs to be more selective in their acquisition decisions (Masulis et al., 2007). Other studies find that CEO role duality does not have an influence on the decision-making process (Ahn et al., 2010; Cosh et al., 2006; Levi et al.,

2008). These findings indicate that the markets react indifferently to M&A announcement by firms where the CEO is also the chairperson of the board of directors.

Given the mixed evidence from developed economies, we hypothesise in its null form, that:

H3.3: There is a negative relationship between CEO role duality and bidder returns.

Table 4.1: Summary of hypotheses

Research Question	Hypothesis	Variable	Hypothesis description
1. Bidder returns	H1.1	CAR [-5, +5]	Bidder returns around M&A announcement date are positive
	H1.2	SMTBVBHAR [+1, +24]	Bidder returns post-M&A announcement date, are negative
2. Corporate governance	H2.1	State shares	There is a negative relationship between state ownership and bidder returns
	H2.2	Legal-person shares	There is a negative relationship between legal-person ownership and bidder returns
	H2.3	Executive shares	There is a positive relationship between executive ownership and bidder returns
	H3.1.	Board size	There is a positive relationship between board size and bidder returns
	H3.2	Independent directors	There is a positive relationship between independent directors and bidder returns
	H3.3	CEO role duality	There is a negative relationship between CEO role duality and bidder returns

4.4 Research model

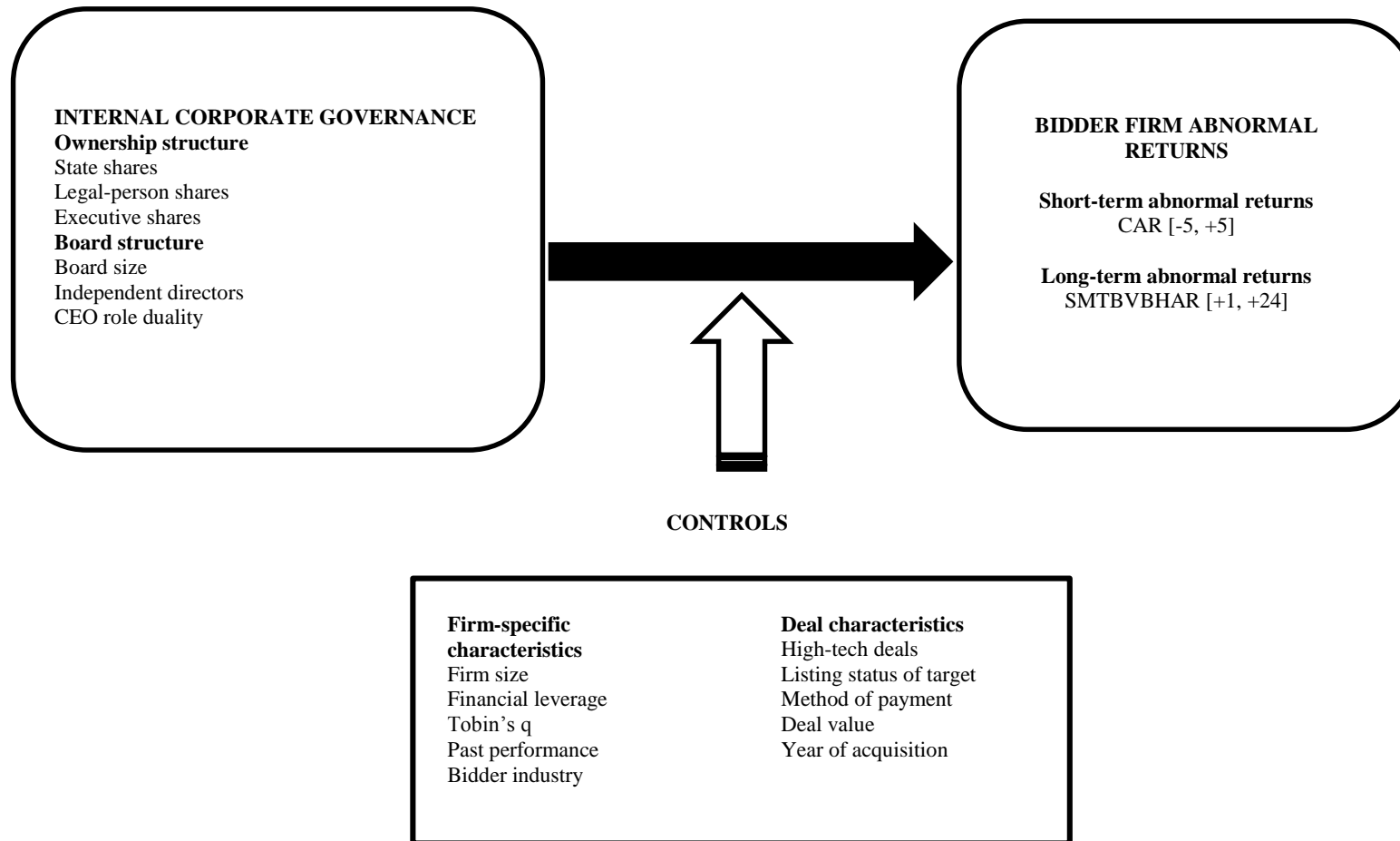
The hypotheses developed above lead to the research model in Figure 4.1 adopted in examining the Research Questions, which include the main variables measuring M&A performance and internal corporate governance, as well as the control variables necessary for the analysis.

This thesis aims to examine the influence of corporate governance variables; state shares, legal-person shares, executive shares, board size, an independent director, and CEO role duality on both short-term and long-term bidder returns. The thesis also controls for firm-specific characteristics; firm size, financial leverage, Tobin's q, return on assets, stock price run-up and sales growth, and deal-specific characteristics; high-tech deals, listing status of target, deal value and method of payment. The model and the individual variables will be explained in greater detail in Chapter 5.

4.5 Conclusion

This chapter made use of the literature review and institutional setting in China from Chapter 2 and 3 to develop Research Questions and testable hypotheses. The chapter started off by developing Research Questions for the study that will aid the examination of the impact of internal corporate governance mechanisms on bidder returns around announcement date. The chapter also developed hypotheses on possible relationships between corporate governance variables and shareholder abnormal returns around announcement date. The chapter then concluded by developing the research framework that will lead the study. The next chapter, Chapter 5, will introduce the methodology used in this study. This will include how the data was collected, how the samples were selected, and how the data was analysed and discussed.

Figure 4.1: Research model



Chapter 5 Sample Selection and Methodology

5.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. The aim of this chapter is to outline and discuss the sample selection process and research methodology used to conduct this study. The final sample was selected after applying screening criteria. The methodology in this study basically involves a two-step procedure. First, an event study on M&A announcements is used to determine bidder firm shareholder abnormal returns. Second, these abnormal returns will then be used in a series of regressions to explain the cross-sectional variation in abnormal returns.

The chapter is organised as follows. Section 5.2 covers the identification of the population for study, before proceeding to discuss sample selection and data collection as well as their sources of information. Section 5.3 provides the characteristics of the sample deals and distribution of mergers and acquisition by year, industry, the method of payment and restructuring type. Presentation of the sample summary statistics follows in section 5.4. Section 5.5 describes the research methods of the study. Section 5.6 details the operationalisation of the two dependent, six independent and eleven control variables. Section 5.7 describes the robustness tests. The conclusion is provided in section 5.8.

5.2 Sample selection and data sources

This section describes the sample selection procedures, the types of data used and the sources of the data used in carrying out this study. Specifically, the section is divided into two subsections. Subsection 5.2.1 describes the sample selection procedure and subsection 5.2.2 presents the types and sources of data used.

5.2.1 Sample selection

The sample of Chinese M&A announced between 1st January 2002 and 31st December 2011 is selected from CSMAR database¹² which contains detailed historical data on M&A dating back to 1998. The period covered by the sample was carefully chosen to eliminate the

¹² CSMAR is a high quality Chinese database produced by a Hong Kong-based company called GTA (Boateng & Bi, 2013).

effects of changes to accounting period requirements and legislative changes in the early 2000s especially Corporate Governance Guidelines which became effective in 2002 (revised 2011) and, Company Law Act passed in December 1993 (revised 1999; 2006). Another justification is that data concerning some corporate governance variables became available in CSMAR database after 2002. The resulting list of M&A announcements was then subjected to the following criteria to be included in the final sample.

Only domestic M&A transactions are selected; both the bidder and the target firms must be incorporated in China. Further, only transactions where deal value is disclosed are selected. To avoid the results generated by very small transactions, the amount paid for the target should be at least US\$1 million. It should be noted that the sample includes only firms that were successfully taken over.

In addition, to avoid dealing with the special regulatory environment and accounting issues related to financial institutions, firms from financial industry are excluded. Only M&A deals in which the bidder is a publicly traded company on either the Shanghai or Shenzhen Stock Exchange are selected to ensure the availability of sufficient publicly disclosed information about the parties involved and about the bid.

Excluded are M&A announcements made by the same bidder if these bids occur within less than 200 trading days since the previous announcement of a bid. The reason is to avoid biases in the estimation of the parameters needed to calculate the abnormal returns. If a firm makes an announcement of acquisitions of two firms on the same date, then this will be treated as a single acquisition.

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

Further, market and share price returns are gathered from CSMAR database. Only the prices of Class 'A' shares with voting rights are considered. The share price data for the bidder must be available for at least a year prior to and three years following the announcement of the M&A since these stock prices are required to compute the bidder's long-term abnormal returns. Effectively our sample period ranges from 1st January 2001 if the announcement was made on 1st January 2002 to 2014, three years from 2011, if the deal was announced on 31st December 2011.

To ensure that the movement in the share price is due to M&A announcement and no other confounding events, events such as share splits, dividend and earnings announcements, and executive changes within the event window are excluded from the sample.

The final sample consists of 1,455 successful deals made by firms incorporated and listed on China's two stock exchanges. This sample is representative of Chinese M&A activity during the sample period for non-financial listed firms and is larger than most previous studies on corporate governance and bidder returns in a Chinese setting (see Appendix C).

5.2.2 Data sources

For the current study, secondary data is collected on a large number of variables that measure corporate governance and stock performance through archival method (Sorescu, Chandy, & Prabhu, 2007). The primary source of data for the current study is the CSMAR Database, which is compiled per the format of some of the world renowned financial databases such as Compustat and CRSP. CSMAR is a financial database about Chinese listed firms. The current study draws its data from four main subsets of CSMAR: M&A, Corporate Governance, Financial Statements and Stock Market Trading to test the developed hypotheses (see Table 5.1).

The sample of M&A transactions such as announcement date, value of the deal, deal-specific characteristics and firm-specific characteristics are drawn from CSMAR Database on China Listed Firms Merger and Acquisition, and Asset Restructuring Research. In addition to M&A transactions, firm-level corporate governance data that include board size, CEO role duality, independent director and executive ownership were obtained from the CSMAR Database on China Listed Firms Corporate Governance Research. Further, firm-level stock and market returns were obtained from CSMAR Database on China Stock Market Trading. Firm-level data on financial characteristics of bidder firms such as Tobin's Q, total assets and ordinary share capital were obtained from CSMAR Database on China Stock Market Financial Statement Research.

Table 5.1: Data and data sources summary

Data Type	Data Description	Data Source
Data related to M&A	<ul style="list-style-type: none">. Announcement date. Value of the deal. Deal-specific characteristics. Firm-specific characteristics	CSMAR Database on China Listed Firms Merger and Acquisition, and Asset Restructuring Research
Data related to corporate governance characteristics	<ul style="list-style-type: none">. Ownership structure. Board structure	CSMAR Database on China Listed Firms Corporate Governance Research
Data related to financial characteristics of bidder firms	<ul style="list-style-type: none">. Tobin's q. Leverage. Firm size	CSMAR Database on China Stock Market Financial Statement Research
Data related to stock price movements	<ul style="list-style-type: none">. Stock returns. Market returns	CSMAR Database on China Stock Market Trading Shanghai and Shenzhen Stock Exchanges

5.3 Characteristics of the M&A deals

After applying the screening criteria as outlined in section 5.2.1, the final sample consists of 1,455 M&A deals announced in during the period 2002 to 2011. Table 5.2 presents the characteristics of the sample M&A deals. Panel A provides the distribution of M&A deals by year of announcement. Panel B shows the distribution of M&A deals by bidder firms' industry. Panel C shows the distribution of M&A deals by the method of payment. Table D shows the distribution of M&A deals by type of restructuring.

5.3.1 Distribution of M&A deals by year of announcement

Panel A shows the distribution of M&A deals by the year of announcement. The panel shows that generally, M&A activity increased in both the number of deals and the value of the transactions over the sample period. The number of M&A deals increased from 80 in 2002 to 189 in 2011. The mean value of M&A deals increased from US\$19.0 million in 2002, peaking in 2008 to US\$87.6 million before decreasing to US\$42.0 million in 2011. The increase in both number and value of transactions shows the confidence of the local market players in the Chinese M&A market.

Table 5.2: Characteristics of the M&A deals

Panel A. Distribution of M&A deals by year of announcement					
	No of Obs.	% of sample	Mean market value of equity (US\$ millions)	Mean deal value (US\$ millions)	Mean relative deal size
2002	80	5.50	546.619	19.028	0.027
2003	117	8.04	447.533	20.666	0.054
2004	122	8.38	758.079	15.209	0.047
2005	102	7.01	350.322	25.862	0.095
2006	106	7.29	699.734	50.103	0.162
2007	182	12.51	590.709	53.090	0.149
2008	177	12.16	3329.576	87.648	0.085
2009	184	12.65	726.574	70.025	0.187
2010	196	13.47	1917.557	77.568	0.129
2011	189	12.99	1483.212	41.962	0.045
Total	1455	100.00	1226.930	51.505	0.104

Panel B. Distribution of M&A deals by bidder industry					
	No of Obs.	% of sample	Mean market value of equity (US\$ millions)	Mean deal value (US\$ millions)	Mean relative deal size
Agriculture	24	1.65	438.672	5.446	0.036
Mining	58	3.99	9143.276	104.346	0.160
Manufacturing	756	51.96	847.494	39.325	0.082
Utility	102	7.01	1189.368	48.344	0.072
Construction	31	2.13	2049.474	109.739	0.104
Transportation	65	4.47	1458.277	177.803	0.175
Information technology	62	4.26	1336.151	36.383	0.042
Retail & wholesale	136	9.35	549.872	31.462	0.097
Real estate	139	9.55	900.175	65.352	0.190
Service	44	3.02	394.752	55.598	0.176
News and media	14	0.96	505.268	39.540	0.420
Miscellaneous	24	1.65	700.453	21.581	0.049
Total	1455	100.00	1226.930	51.505	0.104

Panel C. Distribution of M&A deals by method of payment					
	No of Obs.	% of sample	Mean market value of equity (US\$ millions)	Mean deal value (US\$ millions)	Mean relative deal size
All cash	1311	90.10	1299.900	34.304	0.051
All stock	87	5.98	639.039	245.254	0.762
Other	57	3.92	445.916	151.398	0.327
Total	1455	100.00	1226.930	51.505	0.104

Panel D. Distribution of M&A deals by restructuring type					
	No of Obs.	% of sample	Mean market value of equity (US\$ millions)	Mean deal value (US\$ millions)	Mean relative deal size
Asset acquisition	1446	99.38	1232.577	51.647	0.104
Asset exchange	1	0.07	452.415	14.665	0.032
Debt restructuring	8	0.55	303.109	30.427	0.127
Total	1455	100.00	1226.930	51.505	0.104

The panel also shows the mean bidder market value of equity and relative deal size. It shows that high-value deals involving large bidder firms took place after 2008.

5.3.2 Distribution of M&A deals by bidder industry

Panel B shows the distribution of M&A deals by bidder CSRC industry classification issued in 2001. Manufacturing industry dominates M&A deals in China over the sample period accounting for 756 (51.96%) acquisition announcements. This is followed by real estate industry with 139 announcements accounting for 9.55% of announcements and then closely followed by retail and wholesale industry which accounts for 9.35% (136) of the announcements. The least number of announcements are recorded in the news and media industry with 14 announcements (0.96% of announcements). This may suggest the industry is still highly regulated and controlled by the state. In terms of deal value, the transportation industry accounts for the largest deals (mean deal value of US\$177.8 million) closely followed by construction industry with a mean deal value of US\$109.7 million. The results also show that the largest bidder firms are from the mining industry with a mean market capitalisation of US\$9,143.3 million followed by the construction industry with mean market capitalisation value of US\$2,049.5 million. This may indicate the capital-intensive nature of the industries.

Manufacturing industry records a relatively small mean deal value of US\$39.3 million. They might be three possible explanations why manufacturing industry firms numerically dominate M&A market but not so in value terms, in China. Firstly, this may be explained by the bandwagon theory (Lieberman & Asaba, 2006; Pangarkar, 2000), which posits that firms in the manufacturing industry may be imitating their close rivals as their managers are driven by the urge to increase the size of their firms to earn high pay and built high political profiles. Secondly, the phenomenon might be explained by the deliberate policy by the state to consolidate the highly-defragmented manufacturing industry to increase international competitiveness and reduce fiscal drain by non-performing SOEs. Thirdly, the dominance of the manufacturing industry over the period under review might indicate a wave. M&A are dominated by firms from a particular industry over a particular period of time, what some authors call waves (DePamphilis, 2012; Harford, 2005; Martynova & Renneboog, 2008). The industry shock that manufacturing firms are reacting to is the need for industrial consolidation (Andrade, Mitchell, & Stafford, 2001).

5.3.3 Distribution of M&A deals by method of payment

Panel C presents the distribution of M&A deals by the method of payment. Cash payment dominates the number of announcements with 1,311 representing 90.10% of the total sample. This is consistent with the earlier observation that M&A transactions are dominated by cash deals (see Section 3.5.1). This may indicate that bidder firms finance their acquisitions from internal resources because they have large cash holdings as most firms still conduct most of their business in cash (Boateng & Bi, 2013). The results indicate that it is the large firms that pay in cash for their acquisitions as represented by a mean market value of equity of US\$1,299.9 million. However, on average very large deals tend to be paid by stock (0.76 relative deal size) followed by other methods (0.33 relative deal size). The mean deal value of acquisitions paid in stock is US\$245.3 million while for those paid by other methods is US\$151.4 million. The mean deal value of deals paid in cash is relatively small at US\$34.3 million. This may suggest that bidder firms pay for high-value deals to share potential risks, following the acquisitions, with target shareholders.

5.3.4 Distribution of M&A deals by restructuring type

Panel D presents the distribution of M&A deals by type of restructuring. Asset acquisition accounts for 1,446 announcements representing 99.38% of the announced deals. The asset acquisition is very popular in China mainly because of the political legacy that many of the private firms do not have shares and therefore the best possible acquisition option is by bidding assets whose value are easier to determine and verify. The other advantage of asset purchase is that the bidding firm does not have to assume target liabilities. Debt restructuring comes a distant second with only 8 announcements (0.55%). Like the method of payment, asset acquisition is mainly exercised by large firms with a mean market value of equity of US\$1,232.6 million.

5.4 Summary statistics

Table 5.3 presents the summary statistics for the sample. The sample consists of 1,455 acquisitions announced between 2002 and 2011. The summary statistics are classified into three groups: corporate governance, firm-specific characteristics and deal-specific characteristics. The corporate governance group is further divided into two: ownership structure and board structure variables.

Table 5.3: Summary statistics

The table presents the descriptive statistics of selected governance, firm and deal statistics. Variables definitions are in Table 5.6.

	No of Obs,	Mean	Standard deviation	Q1	Median	Q3
<i>Panel A: Ownership structure</i>						
State shares	1455	0.272	0.258	0.000	0.258	0.505
Legal-person shares	1455	0.172	0.223	0.000	0.048	0.307
Executive shares	1455	0.009	0.056	0.000	0.000	0.000
<i>Panel B: Board structure</i>						
Board size	1455	9.438	2.071	9.000	9.000	11.000
Independent directors	1455	0.330	0.093	0.333	0.333	0.364
CEO role duality	1455	0.123	0.329	0.000	0.000	0.000
<i>Panel C: Firm characteristics</i>						
Market value of equity (US\$ millions)	1455	1226.930	7086.158	204.137	408.829	893.960
Total sales (US\$ millions)	1455	790.210	5869.087	70.247	166.290	412.064
Total assets (US\$ millions)	1455	1019.392	4434.527	150.336	298.902	662.327
Financial leverage	1455	0.430	0.238	0.262	0.458	0.614
Tobin's q	1455	0.487	0.186	0.355	0.500	0.625
Return on assets	1455	0.033	0.057	0.014	0.032	0.056
Stock price run-up	1455	-0.263	0.948	-0.346	-0.110	0.131
Sales growth	1455	0.298	0.815	0.046	0.189	0.383
High-tech	1455	0.043	0.202	0.000	0.000	0.000
<i>Panel D: Deal characteristics</i>						
Deal value (US\$ millions)	1455	51.505	227.234	3.002	7.550	22.854
Relative deal size	1455	0.104	0.444	0.007	0.020	0.058
Private target	1455	0.970	0.169	1.000	1.000	1.000
All cash	1455	0.901	0.299	1.000	1.000	1.000
All stock	1455	0.060	0.237	0.000	0.000	0.000

5.4.1 Ownership structure

Panel A presents the summary statistics of the ownership structure. The ownership structure of Chinese firms has significantly changed over the years but is still highly concentrated. Both state and legal ownership are relatively lower than previous studies, which may be

attributable to the share reform introduced in 2005. The average state ownership is 27.2% and the legal-person ownership is 17.2% of the total sample of outstanding shares. Despite the reduction in state ownership, it is still a controlling shareholder (holding 30% or more of the total outstanding shares) in about 45.5% of the listed firms. This is in line with 84.0% and 46.6% recorded by Qiang (2003) and Chi et al. (2011) at the end of 2001 and 2005 respectively. Inside ownership is still very small in China. In the sample, mean executive ownership is almost negligible at 0.9%.

5.4.2 Board structure

Panel B shows some of the fascinating features of the Chinese board structure and composition. On average, the total number of directors in a board range from 5 to 19, the figures recommended by the Chinese *Company Law* guidelines. An average board size is 9.44 with a median of 9. This reflects full compliance by the Chinese listed firms with the regulations. The average board size is consistent with prior studies (Huyghebaert & Wang, 2010). The results also show that on average, 12.3% of the sample firms' CEOs also hold the position of the Chairperson of the board. Currently, the CSRC requires that the proportion of independent directors sitting on a board should be at least a third of the total number of directors. On average, the results from the sample show that 80.9% of the sample firms are complying with the regulations. However, the firms still have more to do to catch up with corporate governance best practices mainly from the developed countries that require more than half of the board to be independent directors.

5.4.3 Firm-specific characteristics

Panel C presents the summary statistics for firm-specific characteristics variables. The average leverage for our sample is 0.43 which is consistent with findings from previous studies from China S. Li et al. (2011); Pukthuanthong-Le and Visaltanachoti (2009a). The ratio of market value of bidder firms to their replacements value as proxied by Tobin's q is 0.49, implying that the cost to replace a firm's assets is greater than the value of its stock. On average, the firm size, measured by the market value of equity is US\$1,226.9 million with the interquartile values ranging from between US\$204.1 million and US\$894.0 million. The sizes of the firms vary considerably as evidenced by the high standard deviation of US\$7,086.2 million. The stock price run-up, which measures pre-bid stock performance twelve months before an announcement, is negative (average of -26.3%). The

sample bidder firms record strong sales growth of 29.8% and a modest return on assets of 3.3% which is comparable to the mean risk-free interest rate for the same period of 3.46%. Bidder firms have a return on assets of 3.3% which compares with the average risk free rate of 2.36% over the sample period. The sample bidder firms are lowly geared at 43.0%.

5.4.4 Deal-specific characteristics

Panel D shows the summary statistics for the deal-specific characteristics of the sample. For our deal-specific characteristics, the results show that on average, the value of the transaction is US\$51.5 million with the interquartile values ranging between US\$3.0 million and US\$22.9 million. The values also vary considerably given a very high standard deviation of US\$227.2 million. The majority of the acquired firms (target) are unlisted, privately owned firms (97.0% of sample firms). The popularity of private targets is mainly due to their smaller size and being easy victims of political bullying by state-controlled firms (Zhou et al., 2012). About 90.1% of the M&A are paid for by cash confirming that it is the preferred method of paying for acquisitions. Chi et al. (2011) record 87.00% cash transactions, and Tao and Fie (2010) record 80.00% cash transactions. Bidding firms prefer paying by cash than by stock because it allows bidding firms to avoid the complex process of issuing stock in line with the requirements of the CSRC (Chi et al., 2011). Stock-financed M&A deals constitute 6.0% and other payment methods 3.9%. M&A involving firms in the IT industry account for only 4.3% of the sample bidder firms. The panel also shows that the relative deal value is 0.10 indicating ‘bigger firms rescuing smaller struggling firms’.

5.4.5 Corporate governance indicators change over sample period

Table 5.4 presents the corporate governance indicators of bidding firms from 2002-2011. Of interest is the continued decline in state ownership by almost four times from 41.0% in 2002 to 11.0% in 2011 and legal-person ownership from 18.0% to 12.0%. This clearly indicates the effect of the deliberate economic reform policy to reduce state activity in the stock markets. Executive ownership shows a steady increase over the years from a paltry 0.01% in 2002 to 4.0% in 2011. Despite the encouraging improvement in executive ownership, the levels are still negligible.

The mean number of directors on firm boards has consistently remained at 9 over the sample period indicating no urge to increase board size to maximum levels of 20. The proportion of independent directors on boards has dramatically increased from 5.0% in 2002 to 37.0%

in 2011. The increase is in line with the corporate governance guidelines requiring at least a third of board members to be independent directors from 2006. The number of bidder

Table 5.4: Changes in corporate governance indicators

	State shares	Legal-person shares	Executive shares	Board size	Independent directors	CEO role duality
2002	0.41	0.18	0.00	9.20	0.05	0.07
2003	0.40	0.20	0.00	9.37	0.26	0.11
2004	0.39	0.22	0.00	10.08	0.33	0.11
2005	0.40	0.20	0.00	9.60	0.34	0.13
2006	0.37	0.20	0.00	9.45	0.34	0.14
2007	0.31	0.19	0.00	9.49	0.35	0.12
2008	0.25	0.18	0.00	9.50	0.36	0.11
2009	0.23	0.16	0.01	9.46	0.36	0.11
2010	0.12	0.13	0.01	9.17	0.36	0.14
2011	0.11	0.12	0.04	9.22	0.37	0.17
Total	0.27	0.17	0.01	9.44	0.33	0.12

firms in the sample, in which the CEO is also chairperson of the board has surprisingly more than doubled, up from 7.0% in 2002 to 17.0% in 2011, in support of the stewardship theory which favours CEO role duality.

5.4.6 Pearson's correlation matrix

Table 5.5 presents the Pearson's correlation matrix for the selected variables used in this study. The results show that the highest correlation coefficient is - 0.64 between all cash payment and all stock payment. The correlation between state ownership and legal-person ownership is -0.53. Gujarati and Porter (2009), suggest a rule of a thumb that if the correlation coefficient between two variables is more than 0.80, multicollinearity could be a severe problem. The correlation matrix review demonstrates that multicollinearity should not be a problem for the sample as the correlation coefficients in both cases are well below 0.80.

5.5 Research methods

5.5.1 Event study methodology

Consistent with M&A studies, this study employs the event study to measure stock price effects associated with M&A announcements. McWilliams and Siegel (1997), define event

Table 5.5: Pearson's correlation matrix for the variables

	State shares	Legal-person shares	Executive shares	Board size	Board independence	CEO role duality	Total assets	Financial leverage	Tobin's q	Return on assets	Stock price run-up	Sales growth	High-tech	Deal value	Private target
Legal-person shares	-0.529 (0.00)														
Executive shares	-0.157 (0.00)	0.013 (0.54)													
Board size	0.166 (0.00)	-0.136 (0.00)	-0.052 (0.02)												
Board independence	-0.228 (0.00)	-0.023 (0.30)	0.075 (0.00)	-0.098 (0.00)											
CEO role duality	-0.125 (0.00)	0.061 (0.01)	0.119 (0.00)	-0.119 (0.00)	0.051 (0.02)										
Total assets	0.166 (0.00)	-0.272 (0.00)	-0.091 (0.00)	0.225 (0.00)	0.118 (0.00)	-0.088 (0.00)									
Fin. leverage	0.001 (0.96)	0.038 (0.08)	-0.089 (0.00)	0.024 (0.27)	-0.031 (0.15)	-0.030 (0.17)	0.052 (0.02)								
Tobin's q	-0.051 (0.02)	-0.092 (0.00)	-0.132 (0.00)	0.055 (0.01)	0.092 (0.00)	-0.075 (0.00)	0.298 (0.00)	0.303 (0.00)							
Return on assets	0.036 (0.10)	0.003 (0.89)	0.092 (0.00)	0.032 (0.15)	0.089 (0.00)	0.020 (0.37)	0.159 (0.00)	-0.269 (0.00)	-0.369 (0.00)						
Stock price run-up	-0.095 (0.00)	-0.021 (0.34)	0.054 (0.01)	-0.026 (0.24)	-0.004 (0.87)	0.013 (0.54)	0.039 (0.07)	-0.058 (0.01)	0.000 (0.98)	0.108 (0.00)					
Sales growth	-0.031 (0.16)	0.061 (0.01)	-0.008 (0.71)	-0.043 (0.05)	0.031 (0.16)	-0.005 (0.83)	-0.066 (0.00)	-0.059 (0.01)	-0.015 (0.50)	-0.010 (0.66)	0.025 (0.26)				
High-tech	-0.043 (0.05)	0.025 (0.26)	0.063 (0.00)	-0.024 (0.28)	0.010 (0.65)	0.037 (0.09)	-0.051 (0.02)	-0.069 (0.00)	-0.096 (0.00)	0.026 (0.24)	-0.021 (0.34)	-0.016 (0.47)			
Deal value	0.112 (0.00)	-0.140 (0.00)	-0.078 (0.00)	0.076 (0.00)	0.052 (0.02)	-0.062 (0.00)	0.340 (0.00)	-0.055 (0.01)	0.092 (0.00)	0.024 (0.27)	0.037 (0.09)	0.090 (0.00)	-0.039 (0.08)		
Private target	-0.011 (0.63)	0.028 (0.20)	-0.028 (0.21)	0.013 (0.55)	0.003 (0.90)	-0.026 (0.24)	0.012 (0.58)	0.037 (0.09)	0.034 (0.13)	0.003 (0.89)	0.029 (0.19)	0.025 (0.25)	-0.009 (0.67)	0.017 (0.45)	
All cash	0.008 (0.72)	0.076 (0.00)	0.034 (0.12)	0.053 (0.02)	-0.056 (0.01)	-0.002 (0.94)	0.106 (0.00)	0.063 (0.00)	-0.119 (0.00)	0.191 (0.00)	-0.005 (0.83)	-0.126 (0.00)	0.033 (0.14)	-0.351 (0.00)	-0.006 (0.78)

studies as “... powerful tools that can help researchers assess the financial impact of changes in corporate policy” (p. 626). Event studies have been the primary methodology used to assess the effect that the occurrence of an event has on the returns of a firm’s common stock price since the seminal works of (Ball & Brown, 1968; Fama, Fisher, Jensen, & Roll, 1969; Seiler, 2000, p. 101). Stock prices are also supposed to reflect the true value of firms because they are assumed to reflect the discounted value of all future cash flows and incorporate all relevant information. Therefore, event studies, which are based on stock price changes, should measure the monetary impact of a change in corporate policy, leadership, or ownership more effectively than a methodology based on accounting returns. Furthermore, the event study method is relatively easy to implement, because the only data necessary are the names of publicly traded firms, event dates, market returns and stock returns.

5.5.1.1 Assumptions

Conclusions drawn by an event study are only valid if the researcher can confidently identify the abnormal returns associated with the event (McWilliams & Siegel, 1997). It is appropriate to use this method when the below-listed three assumptions as identified by McWilliams and Siegel (1997) are likely to be valid. The first is that the markets are efficient in the sense that the current stock prices incorporate “all the publicly available information along with private information” (Mahmood, Xinping, Shahid, & Usman, 2010, p. 91). The Chinese markets resemble weak-form efficiency in which price of stocks instantly and fully reflect all information of the past prices and, that the future prices cannot be predicted and used to beat the market (Mahmood et al., 2010). The second is that the event was unanticipated and that the market will only know about it when it is announced in the press or through corporate releases. Thus, abnormal returns are a result of a market reaction to the ‘new’ information (McWilliams & Siegel, 1997). The third is that there are no confounding effects during the event window. These are events such as dividend declaration, the announcement of a new product and changes in management that might influence the research event during the event window. The study uses a short 5-day window period to reduce confounding effects or will isolate and eliminate the effects of other events on the research event (Masulis et al., 2007).

5.5.1.2 Event periods

An event study is conducted over four distinct date windows; the event date, estimation period, the event window and the grace period (see Figure 5.1 below). The event date must be carefully defined because of its capability to increase the statistical power of the event study technique and its misidentification can significantly affect findings (Brown & Warner, 1985; Henderson, 1990). Prior studies that use the date of the merger completion as the event date find no significant evidence of wealth effects (Mandelker, 1974) whereas those that use the initial announcement date find significant effects (Asquith, Bruner, & Mullins, 1983). The event date, denoted by 0, is the date on which the information about the merger or acquisition is first announced through the financial press or corporate releases. Following Asquith et al. (1983), the current study uses initial announcement date as provided by the CSMAR database, as the event date.

The second window of interest is the estimation period window also known as the pre-announcement window which is incorporated to capture any information leakages about the event, for example, insider trading. Prior studies apply different estimation periods (see Appendix A). There seems to be some agreement that a shorter estimation period may not truly capture the relationship between the share return and the market return resulting in a bias of the model parameters. If there is any unexpected shock for the stock during a short estimation period, this can significantly affect the estimation of the model parameters. Some researchers have even taken this further by prescribing what they think should be standard estimation period ranges. Bartholdy, Olson, and Peare (2007) recommend an estimation period between 200 and 250 days and, Peterson (1989) and Armitage (1995) between 100 and 300 days when using daily returns data. The present study uses a 200-day period from event day -220 to event day -21. This has been influenced mainly by previous studies (see Appendix A).

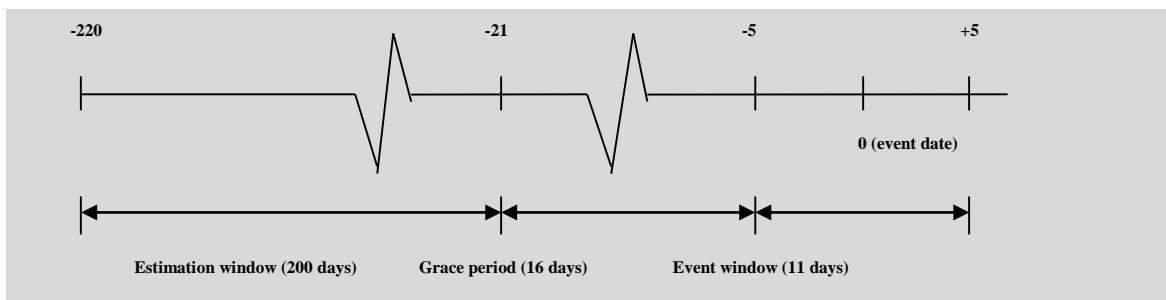
The third window of interest is the event window which is the period around the announcement date, which incorporates pre-announcement days and post-announcement days, adopted to cover for uncertainty over the exact time of publication and public dispersion of information. The event window is also adopted as the benefits of the merger to bidder firms are likely to be reflected in stock values around the time when an acquisition programme is initiated (Kumar & Panneerselvam, 2009). Prior studies use different event window periods. Houston and Ryngaert (1994) and Goergen and Renneboog (2004) argue

that a short event window may miss some run-up returns especially in cases of insider trading or information leakage before the press release.

For the short-term, this study uses the five days before and five days after the announcement date as the event window period. This is due to the prevalence of insider trading in China (Tuan et al., 2007). The eleven-day window also tests for any delayed response by the market to the event due to its weak form of market efficiency. This gives the event window of eleven days $[-5, +5]$ which is consistent with prior studies event windows (see Appendix A). Most long-term studies use event windows ranging from twelve months to sixty months (see Appendix B). This thesis uses twenty-four months (T_{24}) as the event window, informed by literature and the need to limit confounding effects from other events.

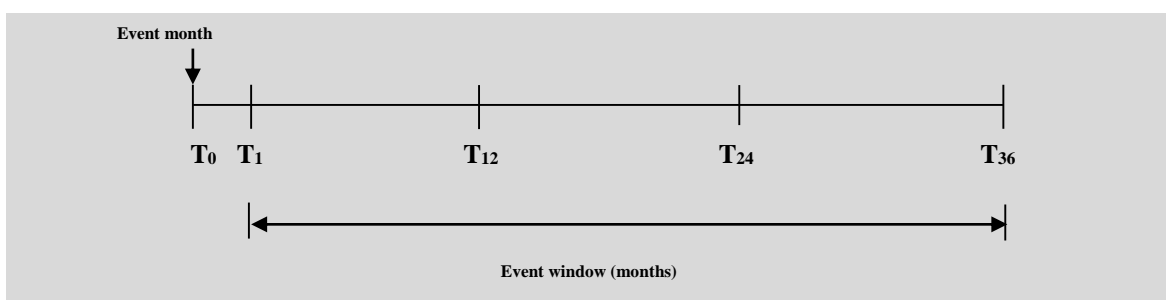
Figure 5.1: Event study setup

Panel A: Short-term event study setup



Note: Panel A illustrates the short-term event study setup. More specifically, $(-220, -21)$ represents the estimation window, $(-20, -5)$ is the grace period and 0 is the announcement date. $(-5, +5)$ represents the event window, that is five trading days before the announcement date and five trading days after the announcement date.

Panel B: Long-term event study setup



Note: Panel B illustrates the long-term event study setup. T_0 represents the announcement month and T_1 represents a period of one month from the announcement month which also marks the beginning of the long-term horizon. T_{12} , T_{24} and T_{36} represent twelve, twenty-four and thirty-six months from the announcement month, and mark the end of the long-term horizon.

The final window of interest is the grace period. The above leaves a grace period of 16 days (see Rosenstein & Wyatt, 1997). The period of 16 days prior to the announcement is excluded from the estimation period to ensure that the data are not contaminated by leaks

during the run-up to the official announcement date (Tuan et al., 2007). Figure 5.2 below presents the event study setup for this study.

5.5.2 Calculation of short-term bidder returns

The sample selection and event definition for the short-term event study were discussed above. Abnormal return (AR) is the difference between the actual stock return (R) and expected return (E(R)), which is the normal or expected return on the stock during the event window if the acquisition announcement had not taken place. This is calculated using the following formula:

$$AR_{it} = R_{it} - E(R_{it})$$

Where i and t denote the security and the day, respectively.

Existing literature on event studies uses a variety of methodologies to estimate benchmark returns (Martynova & Renneboog, 2006). While each model has its own assumptions and its own merits, the choice of the model should be carefully considered. The three main models used to estimate the normal return are mean-adjusted returns, market-adjusted returns and the market model (see Appendix B: Brown & Warner, 1985; Weston et al., 2004). Other models include the factor model and capital asset pricing model (CAPM) (J. Y. Campbell, Lo, & MacKinlay, 1997; Kothari & Warner, 2007).

The market model assumes that there is a linear relationship between the security return and the market return, while the market-adjusted returns model assumes that the expected return of the share is equal to the return of the market and the mean adjusted returns model assumes that the mean return of a given security is constant through time. Logically, it may not be expected that the analysis based on different models can obtain comparable results. However, research suggests that they have similar abilities in detecting abnormal returns (Brown & Warner, 1985; Dyckman, Philbrick, & Stephan, 1984; MacKinlay, 1997). Informed by literature, the present study uses the market model and the market-adjusted returns model to estimate the normal return (see Appendix C).

5.5.2.1 The market model

The market model takes explicit account of both the risk associated with the market and the mean returns (Kumar & Panneerselvam, 2009). Consistent with prior research studies we estimate the market model expected returns using the formula:

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

Where, the coefficients α_i and β_i are regression estimates of the intercept and the slope of the characteristic line. While R_{mt} is the equal-weighted market return on day t of the Shanghai or Shenzhen Stock Exchange depending on which exchange the bidder firm is listed. This is because there is no single composite index for both exchanges. For each stock exchange, we take the All A-Share market returns. These returns are obtained from CSMAR database.

To compute the abnormal returns, firm-specific parameters α_i and β_i are estimated with an OLS regression using 200 daily returns over period starting from event day -220 to event day-21. This is consistent with recommendations made by Bartholdy et al. (2007) that the standard estimation period is between 200 and 250 daily returns (p. 228).

5.5.2.2 Aggregation of abnormal returns

Next, to draw inferences for the event window the abnormal return observations are aggregated. The aggregation is along two dimensions, through time for an individual event and both across events and through time for several events.

5.5.2.3 Aggregation through time

The first dimension is to aggregate abnormal returns through time for an individual event and to obtain cumulative abnormal returns for the individual event over an event window. For the purposes of this thesis the process is described as follows:

$$CAR_{it[-5,+5]} = \sum_{-5}^{+5} AR_{it}$$

$CAR_{it[-5,+5]}$, is the cumulative abnormal return for event i from day (-5) to, day (+5). Day (-5) is the start of the event window and day(+5) is the end of the event window. Given a sample of N events, the cumulative average abnormal return of all events during the event window is the average of the individual event abnormal returns. This described as follows:

$$CAAR_{it} = \frac{1}{N} \sum_{-5}^{+5} CAR_{it}$$

5.5.2.4 Aggregation across events and through time

The second aggregation of abnormal returns is to aggregate the abnormal returns across events and through time. Daily abnormal returns are averaged across the sample of events to obtain the average abnormal returns (AAR). Given a sample of N events, the AAR of all events on day (t), is the average of the abnormal returns is described as follows:

$$AAR_{it} = \frac{1}{N} \sum_{-5}^{+5} AR_{it}$$

The elements of this average abnormal return are then aggregated through time using the same approach as described above. Cumulative average abnormal return (CAAR) is therefore defined as the sum of all average abnormal returns during the event window and is described as follows:

$$CAAR_{it} = \frac{1}{N} \sum_{-5}^{+5} AAR_{it}$$

Positive CAAR indicates that shareholders experience an increase in their own wealth when the event occurs. On the contrary, shareholders experience losses in their own wealth if negative CAAR is generated. The CAAR is then used as the dependent variable to examine whether shareholders of bidder firms gained from M&A. Henderson (1990) reiterates that CAAR¹³ is the widely used measure of abnormal returns and has ‘withstood the test of time’ (p. 297).

5.5.2.5 Significance testing

The test statistic is used to determine whether the abnormal returns are statistically different from zero. The statistical significance of CAR is determined following Dodd and Warner

¹³ Subsequently, CAR refers to the cumulative average abnormal returns (CAAR) for the sample

(1983) and employed by Hagendorff and Keasey (2010). Standardised abnormal returns are used to prevent AR with large variances dominating the test. The t-statistic is calculated using the following formula:

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

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

5.5.3 Calculation of long-term bidder returns

While the short-term performance of M&A described above measures the reaction of the market around the announcement date, the long-term performance measures whether the short-term returns found transpire into the long-term share price improvements for these bidder firms. There is evidence from prior studies that long-term stock performance measurement is sensitive to both the methodology and benchmark used (Fama, 1998). It is also worth noting that, “... the estimation of abnormal returns over long event windows is a matter of some intense debate” (Sudarsanam & Mahate, 2006, p. S15). On one hand, (Barber & Lyon, 1997) and (Lyon et al., 1999) recommend the use of the buy-and-hold abnormal returns (BHAR) for estimating long-term abnormal returns because it measures investor experience. On the other hand, (Fama, 1998) recommends the calendar-time portfolio returns (CTPR) approach arguing that BHAR method worsens the ‘bad model’ problems by compounding. Given all the controversies surrounding measuring long-term abnormal returns, we adopted the two alternative methods: BHAR and calendar-time portfolio returns (Bouwman et al., 2009).

5.5.3.1 Buy-and-Hold Abnormal Returns (BHAR)

Following Barber and Lyon (1997), we adopt the BHAR methodology to examine the performance of M&A and also examine various explanations for the long-term performance of Chinese bidders related to corporate governance, firm-specific and deal-specific attributes. BHAR methodology is one of the widely used and according to Lyon et al. (1999) is the appropriate method because it “specifically measures investor experience” (p. 198).

BHAR is calculated as the difference between long-term compound buy-and-hold abnormal returns of sample firms and the compound buy-and-hold abnormal returns of an appropriate benchmark (Barber & Lyon, 1997). Literature has identified various methods used for

calculating benchmark returns such as reference portfolios, control firm portfolio or the Fama-French three-factor model (Barber & Lyon, 1997). However, concerns have been raised by researchers on the BHAR (Barber & Lyon, 1997; Kothari & Warner, 1997; Lyon et al., 1999) such as rebalancing bias, new listing/survivor bias and skewness bias. These are briefly discussed below.

New listing and survivor bias happen because sample firms are tracked for a long post-event period, while firms in the reference portfolio typically include firms that begin trading after the event taking place. *Rebalancing bias* arises because the returns of sample firms are compounded without rebalancing, whereas the returns of a reference portfolio, for example, an equally weighted market index, are typically calculated assuming periodic rebalancing. Finally, the *Skewness bias* arises because the distribution of long-term abnormal stock returns is positively skewed. This final cause contributes to the misspecification of test statistics. In general, the new listing bias creates a positive bias in test statistics, and the rebalancing and skewness bias creates a negative bias. Cross-sectional dependence in sample observations and a poorly specified asset pricing model is mentioned as additional sources of misspecification. This study applies suggested remedies identified in the literature to address some of the BHAR problems.

5.5.3.2 Creating reference portfolios

To control for rebalancing and new listing bias problems, sample firm long-term abnormal returns were compared to benchmark reference portfolios created using such key factors such as stock market, systematic risk, size and book-to-market ratio as envisaged by (Fama & French, 1993; Sudarsanam & Mahate, 2006). Following Boateng and Bi (2013), the benchmark used for this study is the ten size and fifty size/book-to-market ratio reference portfolios built based on all Chinese listed firms (excluding sample firms in the spirit of (Loughran & Ritter, 2000)) A-Shares recorded in CSMAR database between 2002 and 2011. Adjusting for size and book-to-market effects is important since M&A sample are not distributed equally across the size and book-to-market spectrum. Adjusting for size and book-to-market value also focuses on the impact of book-to-market of broadly comparable size control firms. Appendix D explains in detail the process followed to create ten-size and fifty-size- and- market-to-book value ratio reference portfolios.

5.5.3.3 Estimating long-term abnormal returns

To estimate the long-term abnormal returns, the present study follows the methodology proposed by Lyon et al. (1999). First, the returns on the firms constituting the reference portfolio are compounded and then summed up across the firms using the following:

$$R_{pt} = \sum_{j=1}^{n_s} \frac{\prod_{t=s}^{s+T} [1 + R_{jt}] - 1}{n_s}$$

R_{pt} , is the preference portfolio return, R_{jt} is the month t simple return on firm j , n_s is the number of firms traded in the month s , the beginning of the return calculation and T is the investment horizon in months. We calculate the monthly returns for each of the fifty size and book-to-market reference portfolios by averaging the monthly returns across all securities in a size and book-to-market decile.

Finally, the difference between the returns of the bidder firm from the sample and that of the equally weighted matched reference portfolio is computed to derive the BHAR. BHAR is calculated for 24 months post-M&A period, starting with one month after the announcement date.

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

R_{it} , is the month t return for firm i .

5.5.3.4 Bootstrapped skewness-adjusted statistic

Sudarsanam and Mahate (2006), highlight that BHARs are positively skewed and this problem may increase as the holding period length increases and may also have a weakening effect on statistical tests. We minimise the skewness problem, as recommended by Lyon et al. (1999), by drawing inferences based on bootstrapped skewness-adjusted t-statistic. We take 1000 randomly selected subsamples of size $n/4$ from the original sample. Calculate skewness-adjusted t-statistics for each subsample. Compute the standard deviation for each subsample, that is, 1000 t-statistics. Standardise the t-statistics of the empirical sample by dividing through the standard deviation of the bootstrapped 1000 t-statistics. Compare the resulting value to the corresponding critical value of the standard normal distribution. Mitchell and Stafford (2000) argue that M&A announcements are not independent events and therefore to preserve the dependence structure of the original data, the 1000 subsamples

are clustered by bidder firm as outlined by Horowitz (2003) and implemented by Bouwman et al. (2009).

5.5.4 Univariate analysis using descriptive statistics

Univariate analysis refers to the analysis of a single variable at a time and forms the basis of virtually every quantitative analysis of data (Bryman & Bell, 2011). The most used methods to carry out the univariate analysis include tables, diagrams and descriptive statistics. The type of data will guide you on the choice of statistics. Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures such as measures of central tendency and dispersion. Descriptive statistics are also very useful in identifying outliers.

5.5.5 Multivariate analysis using instrumental variables regression

Multivariate analysis refers to the analysis of three or more variables simultaneously using regression analysis. Multivariate analysis helps in assessing the strength of the relationship between a dependent variable and one or more independent variables (Saunders, Lewis, & Thornhill, 2009).

Studies exploring the relationship between corporate governance and bidder returns face some methodological challenges. One such problem is endogeneity. Endogeneity problem exists when an independent or explanatory variable in an equation is correlated with the error term leading to biased and inconsistent parameter estimates (Roberts & Whited, 2013). “One form of endogeneity problem [affecting corporate governance-abnormal relationship] is an omitted variable bias” (Masulis et al., 2007, p. 1876). The problem is mainly as a result of independent variables being choice variables and some of their determinants affecting the dependent variables as well, and are omitted from the structural equation (Larcker & Rusticus, 2010). The omission of these determinants means the ordinary least squares (OLS) parameter estimates will be inconsistent and biased. The results will, therefore, be interpreted based on unreliable estimates of economic significance.

This study uses instrumental variables (IV) estimation procedures to mitigate the endogeneity problem. An instrumental variable is a variable which is uncorrelated with the error term but correlated with an independent or explanatory variable (Larcker & Rusticus, 2010). However, due to lack of well-developed theory or model of the economic

determinants of corporate governance, it is difficult to find suitable instrumental variables to deal with endogeneity issues in our setting (Ashbaugh-Skaife, Collins, & LaFond, 2006, p. 235). This study, therefore, relies on empirical studies that have attempted to address potential endogeneity of the corporate governance choice following Larcker and Rusticus (2010).

Informed by literature, we identify three instrumental variables used in the 1st stage fitted regressions. Masulis et al. (2007) point out that there may be some unobservable bidder traits that could affect both the level of corporate governance in a firm and abnormal returns. They reiterate that management quality could be one such a factor. For example, firms with good management have greater skills to separate good and bad corporate governance practices (Ariff, Ibrahim, & Othman, 2007). Some studies report that poor past performance (bad management) leads to increases in board independence (Bhagat & Bolton, 2013; Hermalin & Weisbach, 2003). Thus, management quality, proxied by industry-adjusted sales growth and Tobin's q, are used as instrumental variables for state ownership and independent directors. Industry-adjusted sales growth (Tobin's q) is measured by industry median sales growth (Tobin's q) a year prior to the M&A announcement. Another factor could be the effect of the share-split reforms launched in 2006 that allowed non-tradable state shares in listed firms to be traded on the stock exchanges. Empirical evidence shows that the reforms strengthen managerial accountability (Hou, Lee, Tong, & Stathopoulos, 2011) and improves corporate governance (Yu, 2013). To examine this possibility, we include post-reform variable as an instrumental variable for state ownership and independent directors, measured by a dummy variable equal to 1 if the M&A deal was announced after 2005 and 0 otherwise.

For the purposes of this study, state shares and independent directors are used as endogenous regressors and, industry-adjusted Tobin's q, industry-adjusted sales growth and post-reform were used as instrumental variables. Separate endogeneity tests were carried out for all six corporate governance variables and could not reject the null hypothesis that four variables legal-person ownership, executive ownership, board size and CEO role duality are exogenous.

To use the IV, the instruments must be strongly correlated with the instrumented variables and not correlated with the error term. To verify the first assumption, we compare the Cragg-Donald Wald F-statistic to Stock and Yogo (2005) critical values to test for weak

instruments. To verify the second assumption, we use the Hansen J test. We also use the Durbin-Wu-Hausman (DWH) test to test for differences between OLS and 2SLS instrumented results and to determine which estimation method is appropriate for statistical inference (Bhagat and Bolton, 2013). As a robustness test, we perform sensitivity analyses of the instruments by running several types of instrumental variables regressions, that is, two-stage least squares with instruments (IV-2SLS), limited information maximum likelihood with instruments (IV-LIML) and generalised methods of moments with instruments (IV-GMM), and compare the results across the regressions. The results reported in Table 6.4 and Table 7.4 show the instruments have a strong relationship with instrumented regressors and the model is valid and is correctly specified. The Sargan test statistics ($\chi^2 = 0.272, p = 0.6021$ for the short-term and $\chi^2 = 0.035, p = 0.8519$ for the long-term) show that the instruments are uncorrelated with the error term. This may suggest that the instruments are valid and the model is correctly specified. The F-statistics (132.32 for state shares and 155.80 for independent directors) are both greater than the Cragg-Donald Wald F-statistic of 35.06. Also, the Cragg-Donald Wald F-statistic is larger compared to the Stock-Yogo weak instruments identification test critical value of 13.43 at 10% maximal IV size. This suggest that the instruments are strong. The DWH test statistics ($\chi^2 = 5.648, p = 0.059$ for the short-term and $\chi^2 = 56.615, p = 0.000$ for the long-term) show that endogeneity may be a concern in this study suggesting IV estimation technique is the best.

Of the several types of IV regressions, IV-GMM estimation is used for statistical inference. GMM estimates are preferable because they have been widely used in accounting and finance literature. They have large sample properties that are easy to characterise in ways that facilitate comparison and can be constructed without specifying the full data generating process (Hansen, Hausman, & Newey, 2008). In addition, they are more efficient especially when the error term is heteroscedastic, while even in absence of heteroscedasticity, GMM is asymptotically better (Baum, Schaffer, & Stillman, 2003).

The estimation framework adopted for this study, informed by previous empirical studies, is ran using Stata 14.2 and is specified as:

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \varepsilon_i$$

Y is the dependent variable which is either CAR [-5, +5] or SMTBVBHAR [+1, +24]. CAR [-5, +5] is defined as cumulated abnormal returns around announcement period over an

eleven-day event window using market model parameters estimated over 200-day estimation period. SMTBVBHAR [+1, +24] is defined as the mean size and market-to-book value adjusted buy-and-hold abnormal returns over the twenty-four-month period calculated using the market index as the benchmark. X_1 is the vector of the ownership structure variables (state shares, legal-person shares and executive shares), X_2 is the vector of the board structure variables (board size, board independence and CEO role duality), X_3 is the vector of the firm-specific characteristics variables (log total sales, financial leverage, Tobin's q, return on assets, stock price run-up and sales growth), and X_4 is the vector of the deal-specific characteristics variables (high-tech deals, deal value, target listing status and payment method). Mean industry sales growth, mean industry Tobin's q and post-reform are used as instruments for state shares and independent directors.

5.5.6 Hypothesis testing

Tests on the hypotheses related to effects of corporate governance characteristics, firm-specific characteristics and deal-specific characteristics on bidder returns will be carried out using multivariate statistics. The multivariate regression analyses tests using IV-GMM estimation will be carried out determine whether there is a relationship between bidder returns and the set of explanatory variables.

The outcome of the hypothesis test involves two conditions that must be satisfied:

1. The regression weight must be in the hypothesised direction. Positive relationships require positive coefficient and negative relationships require negative coefficient.
2. The test statistic associated with the regression weight of the coefficient must be significant.

If both conditions are satisfied, the hypothesis is supported and if one of these conditions is satisfied then the hypothesis is not supported.

5.6 Variables construction

Following Masulis et al. (2007), the variables are classified into three categories: cumulative abnormal return as the independent variable, corporate governance mechanisms as the independent variables and firm-specific and deal-specific characteristics as control variables. The following subsections describe and explain how the research variables have been measured (see Table 5.2).

5.6.1 Dependent variables

The dependent variable of this study represents the bidder firm abnormal returns. In line with Cording, Christmann, and Weigelt (2010), “our choice of measures was guided by the existing acquisition literature and not by our own preferences” (p. 21). They also find that event study is the most widely used method of acquisition performance and that these measures differ in terms of the length of the event window, the market portfolio benchmark used and the method of calculating abnormal returns. Guided by prior studies (see Appendix A and B), cumulative abnormal returns are used to measure the short-term abnormal returns and buy-and-hold abnormal returns measure the long-term abnormal returns.

5.6.1.1 Cumulative abnormal returns (CAR)

The bidder’s abnormal returns around the announcement date are measured using CAR generated by the market model (Jong et al., 2007; Masulis et al., 2007) as described above. Although prior studies have used different event windows, the underpinning reasoning behind their use is common (see Appendix A). Firstly, the event window must be long enough to cover for the uncertainty over the exact time of publication and public dispersion of information before the event date and delayed response by the market after the event date. Secondly, the event window should not be short enough to miss some run-up returns and long enough to incorporate confounding events.

For the purposes of this study, the CARs are calculated using the market model and the equally weighted market indices. The length of the event window for the selected studies reviewed in Appendix A is eleven days or less, with an average of 4.9 days. Therefore, an 11-day CAR is computed over a window period starting 5 days before the announcement date until 5 days after announcement date that is $[-5, +5]$, where event day 0 is the announcement date. This period is considered sufficient to cover for the delayed response of the weak form market of China after the event date and short enough to prevent confounding events before the event date.

5.6.1.2 Buy-and-hold abnormal returns (BHAR)

The bidder returns in the long-term following M&A are measured using BHAR generated by the size and book-to-market benchmark as described above. Lyon et al. (1999), advocate the use of BHAR method to test for long-term abnormal returns with inference based on a bootstrapped skewness-adjusted t-statistic. The BHAR approach itself is also well-used

within recent literature (see Appendix B). Barber and Lyon (1997), indicate that it provides an accurate measure of the abnormal returns experienced by an investor.

However, Fama (1998, p. 291) argues that long-term BHARs suffer from the ‘bad model’ problem by compounding short-term returns to obtain long-term buy-and-hold. Further, BHARs can produce a statistically significant result even when none is present due to the effect of short-term movements (Buchheim, Grinstead, Janssen, Juan, & Sahni, 2001, p. 28). The possible positive-skewness problem can yield potentially misleading results and thus may cast doubt over the efficiency of the output generated from statistical analysis. Therefore, we employ the use of a bootstrapped t-statistic. This statistical method has gained prominence within the literature as research began to criticise the potential skewed-distribution problem of the BHAR approach (Barber & Lyon, 1997). BHARs do accurately reflect the effect of a particular corporate event upon the investor and their holdings (Buchheim et al., 2001, p. 28) and it is for this reason that they are utilised for assessing the robustness of the long-term performance of Chinese bidder firms. For the purposes of this thesis, BHAR is computed over a period of twenty-four months beginning one month after M&A announcement.

5.6.2 Independent variables

5.6.2.1 State ownership

One of the unique features of China markets is high state ownership. This emanated from the pre-1978 planned economy, where all enterprise was state-owned. With the advent of gradual reforms, most of the listed firms are still state-owned. High state ownership should mitigate any agency conflict between shareholders and managers especially in important and large transactions such as M&A. However, the likelihood of large shareholders’ intervention in corporate decision-making process might lead to the expropriation of minority interests. Studies carried out in other countries have concluded that state ownership is inefficient and pursue other social goals rather than value maximisation (Bae et al., 2002; La Porta et al., 2002). However, in China firms with the state as the controlling shareholder are in a better position to negotiate better M&A deals through state connections (Chi et al., 2011; Zhou et al., 2012). The present study uses the percentage of the number of shares owned by the state before M&A to the total outstanding shares as the proxy for state ownership (Chi et al., 2011).

5.6.2.2 Legal-person ownership

Legal-person ownership represents the second largest owner of most listed firms. Legal-person includes state-owned shares also known as a social legal-person, foreign institutions and individual investors. Studies from China suggest that legal-person shareholders are participating shareholders and because of that, are more incentivised to be involved in monitoring and controlling managers. However, in China firms with a legal-person as a majority shareholder still lack M&A experience, and managerial skills to negotiate good deals (Chi et al., 2011). The present study uses the percentage of legal-person shares of bidders before M&A as a proxy for legal-person ownership (Chi et al., 2011).

5.6.2.3 Executive ownership

Jensen and Meckling (1976), divided shareholders into two groups, internal who manage the firm and external who do not. Both are entitled to the same dividend per share but internal may enjoy, without effective control, non-marketable perquisites such as high salary. According to the agency theory, executive ownership allows for the greater alignment of principals and agents interests, and also the voting rights that come with share ownership increase their influence on the firm (Agrawal & Knoeber, 2012). For the purposes of this study, inside ownership is measured as the percentage of shares owned by bidder executives in relation to the total number of shares in issue reported in the last proxy statement prior to the M&A announcement date. Executive shares include shares owned by the general manager, president, CEO, deputy general manager, vice president, secretary to the board and other managerial persons disclosed in the annual report exclusive of directors and supervisors. Although it is common to use only the CEO's equity ownership as a measure of executive ownership (Wright et al., 2002), we instead use all executives' equity ownership in recognition of the important role of other senior executives in specific decisions such as M&A.

5.6.2.4 Board size

The size of the board of directors refers to the total number of directors who sit on the board of each firm, including the CEO and the Chair of the board (Cosh et al., 2006). Sometimes members of the board of directors include members with such titles as outside directors, inside directors, executive directors, non-executive directors and independent directors. The number of directors is reported every year in the financial statements which are

available publicly and circulated to all the shareholders. A board must have enough number of directors to discharge its fiduciary duties effectively and efficiently, while at the same time presenting diverse of views and experience. According to the resource dependency theory, a larger board presents diversity in terms of experience and networks. On the other hand, the agency theory posits that large boards are associated with delays in decisions as views of all the directors must be considered and individual directors might lose the sense of accountability. The measure of board size for the purposes of this study refers to the total number of directors on a board as per the CSMAR database, in the year preceding M&A announcement date (Kroll et al., 2008).

5.6.2.5 Independent director

One of the internal corporate governance mechanisms that the literature suggests can be used in reducing agency and information asymmetry problem in modern corporations is the appointment of independent directors (Fama & Jensen, 1983; Jensen, 1993; Lipton & Lorsch, 1992). Independent directors are the non-executive, outside or unrelated directors sitting on the firm board. They are classified as non-employees of the firm, who are only paid an allowance for their services and not a salary. The number of independent directors on a board is provided by the CSMAR database. Cotter, Shivdasani, and Zenner (1997) following Brickley, Coles, and Terry (1994) define a board as independent when independent directors are more than 50% of the board membership. The higher is this ratio the greater is the independence of the board. In China context, an independent board is defined as one where 33% of the members are independent. The present study, therefore, uses independent director dummy variable equal to 1 if over 33% of bidder directors are independent and 0 otherwise in the year prior to M&A announcement.

5.6.2.6 CEO role duality

CEO role duality refers to a situation where the CEO also serves as the chairperson of the board. This place the CEO in a very powerful position of managing the day-to-day activities of the firm as well as overseeing board functions such as hiring, firing and top management compensation, including the CEO. According to the agency theory, this creates a potential conflict of interests (Jensen, 1993). However, separating the roles does not remove the conflict of interest and improve board effectiveness. The stewardship theory espouses that combine CEO and chairperson roles help reduce remuneration costs and speed up decision making. However, empirical evidence is quite mixed. The most common measure used to

estimate CEO role duality is a binary variable. The CEO variable equals 1 if the CEO also serves as the chairperson of the board and 0 otherwise a year before M&A announcement (Masulis et al., 2007).

5.6.3 Control variables

The present study controls for several firm-specific potential confounding factors that are expected to influence the cumulative abnormal returns of sample firms. The present study draws from prior research and the limits of Chinese financial reporting, to address the resulting potential for omitted variable bias. Prior research identifies firm-specific characteristics and the deal-specific characteristics as the key variables to control (Bradley et al., 1988; Lang et al., 1989; Masulis et al., 2007; Servaes, 1991). This thesis controls for Tobin's q ratio, leverage, geographical focus, related party transactions, firm size, listing status of target firm, method of deal financing, deal value, acquisition experience and post share reform deals.

5.6.3.1 Firm size

The size of a firm has a major bearing on performance as it is usually a good indication of existing financial and human resources and management experience (Moeller et al., 2004). The most widely used proxies for firm size are logarithmic transformations of total sales (Wright et al., 2002), total assets (Masulis et al., 2007; Moeller et al., 2004) and market value of equity (Bauguess & Stegemoller, 2008; Jong et al., 2007; Swanstrom, 2006). Moeller et al. (2004) and Masulis et al. (2007) find that the logarithmic transformation of total assets is negatively related to abnormal returns measured by CAR suggesting that large acquirers do not make value creating M&A decisions. For the purposes of this study, the logarithm of the total sales is used as a proxy for the firm size as it is widely used in prior studies.

5.6.3.2 Financial Leverage

The study controls for financial leverage based on Jensen (1986) free cash flow hypothesis. Leverage is an important governance mechanism since higher debt levels help reduce future free cash flows and limit managerial discretion (Masulis et al., 2007). Leverage also provides incentives for managers to improve firm performance as they cede significant control to creditors and often lose their jobs if their firms fall into financial distress.

Leverage is defined as a firm's book value of long-term debt and short-term debt divided by its market value of total assets (Masulis et al., 2007).

5.6.3.3 Tobin's Q

Tobin's Q is the most used accounting measure of a firm's performance in prior literature (Denis & Denis, 1994; S. Ma & Tian, 2009). It compares the value of a firm given by the stock markets with the value of the firm's assets as recorded in its books. In the current study Tobin's Q is calculated according to Masulis et al. (2007) that is, the ratio of a bidder's market value of assets over its book value of assets, where the market value of assets is computed as the book value of assets minus the book value of common equity plus the market value of common equity.

5.6.3.4 Past performance

Three measures of past performance were adopted for this study. The first measure is the return on total assets. Return on assets is defined operating income divided by the total assets, calculated as of the fiscal year-end preceding the announcement date:

$$\text{Return on assets}_t = \frac{\text{Operating income}_{t-1}}{\text{Total assets}_{t-1}}$$

The second measure of past performance is that of growth in sales over one year prior to acquisition:

$$\text{Sales growth}_t = \frac{\text{Sales}_t}{\text{Sales}_{t-1}}$$

The third measure of past performance is the stock price run-up. It is defined as the buy-and-hold abnormal returns during twelve months before announcement month.

5.6.3.5 High-tech

Recently, the M&A market has been dominated by high-tech acquisitions due to their high-growth and high-risk nature. Acquiring high growth targets offer bidder firm shareholders greater wealth benefits than slow growth targets buoyed by the markets' optimism about the potential synergies of high-tech acquisitions (Kohers & Kohers, 2000; Lusyana & Sherif, 2016). Kohers and Kohers (2006) find supporting evidence that high-tech acquisitions create value for the shareholders. However, such acquisitions come at a high

price tag. Bidder firms are more likely to be motivated by managerial hubris thus, underestimate costs and overestimate potential synergies (Masulis et al. 2007). Masulis et al. (2007) find that bidder returns are lower in deals combining two high-tech firms. Given the mixed results, we included high-tech as a control variable. A dummy variable denoted by high-tech was created that equals to 1 if the M&A is between two firms in high-tech industries.

5.6.3.6 Deal value

Prior research indicates that the size of the M&A transactions in monetary terms can influence transaction outcomes. Large transactions measured as the logarithmic transformation of the monetary value of the M&A deal, have been negatively associated with bidder returns (Houston & Ryngaert, 1994). In a study of UK cross-border M&A, Uddin and Boateng (2009) find that size of the deal does not have a positive bearing on wealth gains of the acquirers. Thus, the logarithmic transformation of deal value was included as a control variable.

5.6.3.7 Listing status of target firm

The status of target ownership is also related to the stock market's response to M&A announcement (Masulis et al., 2007). Evidence from prior studies suggests that bidders experience significantly negative returns when buying public firms and positive returns when buying private firms (Fuller et al., 2002). In addition, Masulis et al. (2007) find that bidding subsidiaries generate much more positive returns for the bidder than public or private targets. However, (Moeller et al., 2004) find that both private and public targets are negatively related to abnormal returns. For the purposes of this study, two variables denoted by public and private to represent target ownership status are created in accordance with (Masulis et al., 2007). The public (private) variable equals 1 when the target ownership status is public (private) firm and zero otherwise.

5.6.3.8 Method of payment

The present study controls for the nature of payment because prior studies have concluded that there is a relationship between the method used for paying for M&A transaction and the market's reaction to M&A announcement (Ghosh, 2001; Masulis et al., 2007). There is evidence from prior studies that bidders experience significantly negative abnormal returns when they use stock to pay M&A transaction, while cash-financed transactions are

associated with positive returns (Ghosh, 2001; Loughran & Vijh, 1997; Travlos, 1987). For the purposes of the present study, two methods of payment indicators are created that is for the stock deal and cash deal following Cosh et al. (2006). All stock deal equals 1 when M&A transaction is financed fully with stock and zero otherwise. All cash deal equals 1 when M&A transaction is 100% cash-financed and zero otherwise.

5.7 Robustness tests

The study performs robustness tests to increase confidence in the main findings. This includes using alternative measures for short-term and long-term abnormal returns calculations, event windows, corporate governance and firm size.

5.7.1 Market-adjusted returns model

To examine the sensitivity of the results calculated from the market model, this study also utilises an alternative event study method in terms of the market-adjusted returns model to estimate the expected return. This model cannot only provide additional insights on the impact on shareholder wealth but also assist in checking the robustness of the results. Thus, the model specifications of this model are discussed in the following section.

The market-adjusted return model is a special variation of the market model. It assumes that β_i equals 1 and α_i equals 0. Accordingly, the expected return is estimated as:

$$E(R_{it}) = R_{mt}$$

where $E(R_{it})$ is, the predicted or expected return on stock i on day t and R_{mt} is the equal-weighted market return on day t of the Shanghai or Shenzhen Stock Exchange depending upon where the bidder firm is listed.

Therefore, abnormal return measures the difference between the return of each share and the return of the market index. Thus, the formula is presented as follows:

$$AR_{it} = R_{it} - R_{mt}$$

where, AR_{it} is the abnormal return on stock i on day t , R_{it} is the daily actual or realised stock return on firm i on day t and R_{mt} is the equal-weighted market return on day t of the Shanghai or Shenzhen Stock Exchange depending upon where the bidder firm is listed.

While the vast majority of the studies apply the market model, two studies compute the expected share price based on the market-adjusted returns model (Bauguess & Stegemoller, 2008; Cosh et al., 2006). Applying the market-adjusted returns model has its fair share of benefits and challenges. Firstly, it is relatively simpler to calculate as it assumes that the expected return is equal to market index return. Secondly, it does not require an estimation period. Thirdly, it eliminates biases derived from the problem of thin trading using daily trading data. The main challenge of applying the market-adjusted return model derives from the assumption that returns are equal across shares (Brown & Warner, 1985) but can vary across securities.

5.7.2 Calendar-Time Portfolio Returns (CTPR)

The second measure adopted for measuring long-term returns is the calendar-time portfolio returns (CTPR). There is evidence from prior research that stock returns can be explained by a number of fundamental factors (J. Lin, Wang, & Cai, 2012). The widely used in finance research are the Fama-French three factors which include the market risk premium, the size proxy, and the book-to-market equity proxy (Fama & French, 1993). It is now common wisdom that these three factors eliminate cross-sectional correlation of event firm abnormal returns and capture the anomalies of the capital asset pricing model (CAPM) (Fama, 1998; Mitchell & Stafford, 2000). They formulate their model as:

$$R_{pt} - R_{ft} = \alpha + \beta_1(R_{mt} - R_{ft}) + \beta_2(SML_t) + \beta_3(HML_t) + \varepsilon_t$$

R_{pt} is the equal or value-weighted (the weight being the market capitalisation of the bidder firm at the beginning of each month) return on portfolio t , R_f is the monthly risk-free rate defined as the 91-day treasury bill rate, $R_m - R_f$ is the excess return on the market, SML is the difference between the excess return on a portfolio of small stocks and the excess return on a portfolio of big stocks and HML the difference between the excess return on a portfolio of high-book-to-market stocks and the excess return on a portfolio of low-book-to-market stocks. The intercept α measures the average monthly abnormal return on the portfolio of event firms.

Taking the work of Fama and French further, Carhart (1997) added a momentum related factor to the Fama-French three factors that compare winners and losers (WML). This has gained popularity with finance researchers (e.g., Ang & Zhang, 2004). The resultant formula for event studies is thus illustrated as:

$$R_{pt} - R_f = \alpha + \beta_1(R_m - R_f) + \beta_2(SML_t) + \beta_3(HML_t) + \beta_4(WML_t) + \varepsilon_t$$

WML is the average return on the two winner portfolios minus the average return on the two loser portfolios.

For the purposes of this study, we measure long-term abnormal returns by using a portfolio method similar to the one used by Fama (1998). For each calendar month, an event portfolio is formed comprising all firms that have announced a successful M&A event within the last two years. Portfolios are rebalanced monthly, that is drop firms that have reached the end of their two-year period and add firms that have just announced a transaction. Monthly return of the event portfolio is computed as the equally weighted or value weighted average of monthly returns of all firms in the portfolio. Excess returns of the event portfolio are then regressed on the Fama-French and Carhart momentum factors (Carhart, 1997; Fama & French, 1993). The dependent variable is the monthly portfolio excess return and the independent variables are the monthly excess return of the market index and the monthly returns of the HML, SMB and WML factors. These factors are not publicly available and therefore, followed the procedure as outlined on the Fama-French data library to construct the Fama-French and Carhart factors for this study (see Appendix E for details). Since the error term ε could be heteroscedastic due to the change in the number of firms each month, we apply weighted least squares (WLS) to correct for this (Ang & Zhang, 2004; Fama, 1998). The weights applied in WLS are the number of event firms in each calendar monthly event.

5.7.3 Variant event windows

Following Masulis et al. (2007), sensitivity analysis on variant event windows will be examined to ensure the generalisation of the results. As Chinese capital markets are still in their developing stages and weak-form efficient, a relatively long-period market reaction will be monitored to ensure that the market does not have the corresponding reaction to a certain event. Also, not to miss some run-up returns especially in cases of insider trading or information leakage before the press release, we widened the event window to twenty-one- day [-10, +10] and forty-one- day [-20, +20] event windows. To isolate the specific impact of the occurrence of an event, the event window was narrowed to two-day [-1, 0], three-day [-1, +1] and [-2, +2] event windows. We also calculate BHAR for 12 months and 36 months after M&A announcement for our sample in robustness tests in the long-term.

5.7.4 Corporate governance index

Recent studies have explored the relationship between corporate governance and firm performance by “construct[ing] an index comprised of multiple dimensions of a firm’s governance structure” (Bhagat, Bolton, & Romano, 2008, p. 1832). Findings from these studies suggest that using different corporate governance variables may not show a significant relationship with an independent variable individually but may do so in combination with other corporate governance variables (Aguilera & Desender, 2012; Aguilera, Desender, & de Castro, 2012; A. J. Ward, Brown, & Rodriguez, 2009). In addition, the findings suggest that firm-level corporate governance variables may influence outcomes under certain institutional settings (Kogut, 2012). For purposes of this study, we use the composite corporate governance index as an alternative to the individual corporate governance variables.

Following DeFond, Hann, and Hu (2005), we combine the corporate governance variables into a single dichotomous variable (*Governance index*) using the median values of these variables. We construct our summary governance measure by creating six dichotomous measures for each sample observation, such that values of 1 indicate strong governance and values of 0 indicate weak governance. The following describes how we dichotomise each of the six characteristics:

- *State ownership*: Prior studies evidence suggests that the state because of the need to achieve political and social objectives at the expense of economic objectives as well as weak monitoring of managers does not necessarily improve corporate governance. Bidder firms with state ownership are valued less favourably by the markets (K. Li et al., 2009; Sun & Tong, 2003; Z. Wei et al., 2005). Therefore, we code firms 1 if the appointing firm’s percentage of state ownership is less than the sample median and 0 otherwise.
- *Legal-person ownership*: Legal-persons because of the relatively large part of cash flow rights they have in bidder firms, have more incentive and interest in monitoring and controlling managers more incentive and interest in monitoring and controlling managers (Tan, 2002). Bidder firms with legal-person ownership are valued favourably by the markets. Therefore, we code firms 1 if the bidder firm’s percentage of legal-person ownership is greater than the sample median and 0 otherwise.

- *Executive ownership*: There is evidence to suggest that managerial ownership is associated with value creating decisions, reflecting greater incentives for managers to maximise value as their stakes rise (see e.g. Bauguess & Stegemoller, 2008; Ben-Amar & Andre, 2006; Cosh et al., 2006; Datta et al., 2001). Therefore, we code firms 1 if the appointing firm's percentage of executive ownership is greater than the sample median and 0 otherwise.
- *Board size*: A small board size is associated with good governance and a large board being associated with less effectiveness and more dependence Yermack (1996). Therefore, we code firms 1 if the bidder firm's board size is less than the sample median, and 0 otherwise.
- *Independent directors*: A higher percentage of independent directors on a board is associated with good governance (Kroll et al., 2008). Independent director is coded 1 if the bidder firm's proportion of independent directors is greater than 33% and 0 otherwise.
- *CEO role duality*: When the CEO also serves as the Chairperson of the board, board independence becomes lower (Bozec, 2005). Therefore, we code firms 1 if the bidder firms' CEO and Chairperson are two separate individuals and 0 otherwise.

We construct our summary governance measure by summing the six dichotomous measures for each sample observation and then creating a dichotomous variable based on the median of the summed values. Thus, our summary measure is constructed from an equally weighted aggregation of the six governance characteristics and essentially captures the number of governance characteristics in which each firm is classified as having strong or weak governance. The median value for the summed values is 4.32 and therefore values with values above 4.32 were classified as having strong corporate governance while those with values of 4.32 and below were classified as having weak corporate governance.

5.7.5 Alternative firm size measure

The size of the firm is used in empirical finance as a fundamental firm-specific characteristic. The most commonly used measures of firm size employed include, all in natural logarithms, total assets, total dollar annual sales, the number of employees and market value of equity. An alternative natural logarithm of total assets is used to proxy for firm size.

Table 5.6: Summary of variable definitions

Panel A: Cumulative abnormal returns	
CAR [-5, +5)	Eleven-day cumulative abnormal return calculated using market model. The market model parameters are estimated over 200-day estimation period starting from -220 to -21 before announcement date
SMTBVBHAR [+1, +24]	Bidder's buy-and-hold returns minus the benchmark portfolio's buy-and-hold returns over same post-acquisition periods, that is, 24 months. The equally weighted market index returns for the Shanghai or Shenzhen Stock Exchange are used depending on which the sample firm is listed.
Panel B: Corporate governance characteristics	
State shares	Percentage of state ownership in the bidder firm a year before M&A announcement
Legal-person shares	Percentage of legal-person ownership in the bidder firm a year before M&A announcement
Executive shares	Percentage of executive ownership in the bidder firm a year before M&A announcement.
Board size	Total number of directors serving on the board
Board independence	Percentage of independent directors on bidder's board a year before M&A announcement
Independent director	Dummy variable equal to 1 if over 33% of bidder directors are independent and 0 otherwise.
CEO role duality	Dummy variable equal to 1 if the bidder CEO is also chairperson a year before M&A announcement and 0 otherwise.
Governance index	Dummy variable equal to 1 for good corporate governance and 0 otherwise.
Panel C: Firm-specific characteristics	
Tobin's q	Market value of assets over the book value of assets
Financial leverage	Book value of debt divided by the market value of total assets
Stock price run-up	Bidder's buy-and-hold abnormal returns (BHAR) during 12 months before announcement month.
Firm size	Logarithmic transformation of total sales
Sales growth	Sales growth from the previous year
Return on assets	Operating income divided by total assets of the bidder firm at the end of the year
Panel D: Deal-specific characteristics	
High-tech	Dummy variable equal to 1 if bidder and target are both from information technology industries as defined by CSRC (2001) and 0 otherwise
Private target	Dummy variable equal to 1 if the target is a private firm and 0 otherwise
All cash	Dummy variable equal to 1 if the M&A deal is all paid in cash and 0 otherwise
All stock	Dummy variable equal to 1 if the M&A deal is all paid for by stock and 0 otherwise
Deal value	Logarithmic transformation of the value of the M&A deal in Chinese Yuan.
Post-reform	Dummy variable equal to 1 if the M&A deal was announced after 2005 and 0 otherwise

5.8 Conclusion

This chapter discussed the research design and the methodology used to conduct the study in an orderly manner that follows a logical progression. The chapter presents the sample and describes the data collection process and develops the measures used in estimating the regression model which tests the relationship between corporate governance and bidder announcements returns. This chapter describes the empirical method that is event study methodology, to be used to test the bidder announcement returns hypotheses which were constructed in Chapter 4. Univariate and multivariate analyses will be conducted on the data sets. Prior to performing the tests, the data will be tested for multicollinearity. To ensure the reliability of the results robustness checks will also be carried out.

The next two chapters present the results of the data analysis. The chapters present the univariate and multivariate tests results will be reported.

Chapter 6 Short-Term Empirical Results

6.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. While the next chapter will present the long-term analysis, this chapter presents the short-term analysis. For the short-term, CAR represents the shareholder wealth performance and is computed using the market index returns as benchmark returns over eleven-day (-5, +5) event window. Five other windows are adopted as a robustness check. An alternative benchmark, the market-adjusted returns model, is also adopted as a robustness test. As the abnormal returns are calculated using the market model benchmark, the statistical significance is tested using the simple t-tests (Brown & Warner, 1985). The IV-GMM estimation method is used to test hypotheses on the impact of corporate governance structure on abnormal returns. The regression models are estimated using heteroscedasticity and bidder cluster adjusted standard errors in the spirit of White (1980).

This chapter presents the results of the empirical evidence for bidder firms' shareholder wealth in the short-term. The bidder returns results are presented in the following section together with its statistical distribution. Next, instrumental variables analysis results are presented to determine whether corporate governance mechanisms in place a year before M&A announcement can be important determinants in explaining bidder firms' returns around announcement date. The multivariate results include tests for the impact of bidder and deal-specific characteristics on abnormal returns. Robustness tests results for alternative variable measurement follow. The chapter concludes with a summary of the empirical findings.

6.2 Univariate analysis

In this section, summary statistics for the abnormal returns around the announcement date for bidder firms are presented. This is followed by the presentation of the results of the statistical distribution of short-term bidder returns (CAR). Results of the distribution of CAR over time follow. The section ends with a presentation of CAR analysis by the listing status of the target firm, bidder firm industry, firm size and the method of payment.

6.2.1 Cumulative abnormal returns (CAR)

Table 6.1 shows the bidder firms' cumulative abnormal returns during the various event windows. In the total sample of 1,455 M&A announcements, bidder firms obtain a positive and statistically significant return (0.018, $p < 0.001$) over the 11-day event window (CAR [-5, +5]). The results indicate that on average bidder firm's managers make M&A decisions that create value for the shareholders. This may suggest that stock prices react instantaneously to "new" information in the short-term as markets perceive higher potential synergetic gains from the consolidation of fragmented firms. The market reaction is as expected, as on completion, higher market share, power and a larger customer base will result. The results support the neoclassical theory which predicts that bidder firms gain in the short-term when managers aim to maximise shareholder value and act rationally.

Table 6.1: Short-term bidder returns using the market model

The table reports the short-term bidder returns and the statistical distribution for a sample of 1,455 acquisitions announced and successfully completed between the period 2002 and 2011 over different event windows. Cumulative abnormal returns are estimated using the standard market returns model method as in Brown and Warner (1985). Market returns model parameters are estimated over the period from day -220 to day -21.

Market Returns Model: Cumulative Abnormal Returns (CAR)							
Event window	No of Obs.	Mean	Standard Deviation	Q1	Median	Q3	p-value
CAR [-1, 0]	1455	0.010	0.046	-0.014	0.004	0.029	0.000
CAR [-1, +1]	1455	0.012	0.064	-0.021	0.003	0.030	0.000
CAR [-2, +2]	1455	0.016	0.082	-0.027	0.002	0.042	0.000
CAR [-5, +5]	1455	0.018	0.108	-0.038	0.003	0.052	0.000
CAR [-10, +10]	1455	0.018	0.138	-0.057	0.006	0.069	0.000
CAR [-20, +20]	1455	0.019	0.189	-0.083	0.006	0.106	0.000

The results suggest that M&A create value for bidder firm shareholders, which is attributed to state intervention in the process and the private firm liquidity discount as well as the benefits of political connectedness. Target firms, who are mainly privately-owned, financially distressed and small, are usually coerced into accepting lower bidder valuations of their firms. Bidder firms are mainly large and powerful listed firms with state majority shareholding. The results are also consistent with previous studies on China and other countries outside the US and the UK M&A deals (see Appendix A). There is convincing evidence not to reject hypothesis **H1.1** that abnormal returns in the short-term are positive.

The results also show that there is a large variation in the distribution of abnormal returns

among the bidder firms. Bidder returns for the 11-day event window [-5, +5] vary in the interval -0.038 and 0.052. Although the CARs interquartile range is large (0.090), most of the returns are concentrated around the mean (0.018) over the 11-day event window. With a standard deviation of 0.108, this indicates that there is a large amount of M&A performing similarly. There are 763 (52.44%) bidder firms that record positive abnormal returns while 692 (47.56%) that report negative bidder returns.

In Appendix A, it can be noticed that different studies apply different event windows ranging from 2 days to 41 days and studies from China apply longer event windows. We consider an event window long enough to take into account insider trading, information and late reactions to market information as the Chinese are not yet as sophisticated as their Western counterparts. For the purposes of this study, we apply the 11-day event window as the dependent variable for the main regression analysis.

6.2.1.1 Short-term bidder returns analysis by year of announcement

Table 6.2 presents the distribution of short-term bidder returns over time. The results show that acquisitions announced in the early years of the sample period, 2002 and 2005 record negative but insignificant bidder returns around the announcement date. The negative returns may suggest bidder firms were pre-occupied with other objectives than economic. Most of the M&A deals were not borne out of the wishes of the involved parties. Majority of the acquisitions were undertaken in pursuance of state policy of ‘aid the strong by supporting the weak’, to get rid of non-performing SEOs. Participating bidders also obtained state credit and tax advantages. Thus, such M&A deals were not favourably valued by the markets.

The distribution of bidder returns by year of announcement clearly shows the impact of the share reforms with acquisitions announced after the reforms (in the year 2006) reporting positive and significant returns to the shareholders. This period is synonymous with the introduction of share reforms which made non-tradable shares, tradable. During this period, there was a shift in M&A motives, from supporting weak SEOs to long-term development strategy for a firm. It was during this period the state left pricing to the market mechanisms.

Table 6.2: Short-term bidder returns analysis by year of announcement

The table reports the short-term bidder returns and the statistical distribution for a sample of 1,455 acquisitions announced and successfully completed between the period 2002 and 2011 over time. Cumulative abnormal returns are estimated using the standard market returns model method as in Brown and Warner (1985). Market returns model parameters are estimated over the period from day -220 to day -21.

	CAR [-5, +5]	No of Obs.	% of sample	p-value
2002	-0.007	80	5.50	0.157
2003	0.002	117	8.04	0.634
2004	0.003	122	8.38	0.672
2005	-0.002	102	7.01	0.706
2006	0.009	106	7.29	0.260
2007	0.032	182	12.51	0.001
2008	0.034	177	12.16	0.001
2009	0.032	184	12.65	0.001
2010	0.026	196	13.47	0.005
2011	0.014	189	12.99	0.058
Total	0.018	1455	100.00	0.000

6.2.2 Short-term bidder returns analysis by subsamples

Table 6.3 below presents the results of the short-term bidder returns analysis by different data panels. Panel A presents the distribution of returns by the listing status of the target firm. Panel B presents the distribution of returns by bidder firm size. Panel C presents the distribution of returns by bidder firm size. Lastly, Panel D presents the distribution of returns by the method of payment.

6.2.2.1 Listing status of the target firm

There is evidence from prior research that bidder firms that acquire private target firms earn higher returns than those that acquire public target firms (Masulis et al., 2007; Moeller et al., 2004). To test for this, the sample was divided into two sub-groups: listed (public) targets and unlisted (private) targets. As identified in Table 6.3 below, mean bidder returns for private targets are significantly positive and higher than public targets. The bidder returns for public targets is positive albeit statistically insignificant. Thus, private firm bidders earn higher returns than bidders for public targets.

Table 6.3: Short-Term Distribution of Bidder Returns by Subsamples

CAR is the cumulated abnormal returns around announcement period over an 11-day event window using the market model parameters estimated between -220 and -20 days.

Panel A: Distribution of bidder returns by target status

	No of Obs.	% of sample	CAR [-5, +5]	p-value
Private target	1412	97.04	0.018	0.000
Public target	43	2.96	0.008	0.665
Total	1455	100.00	0.018	0.000

Panel B: Distribution of bidder returns by industry

	No of Obs.	% of sample	CAR [-5, +5]	p-value
Agriculture	24	1.65	0.040	0.016
Mining	58	3.99	0.046	0.034
Manufacturing	756	51.96	0.016	0.000
Utility	102	7.01	0.011	0.135
Construction	31	2.13	0.034	0.060
Transportation	65	4.47	0.033	0.005
Information tech.	62	4.26	0.004	0.766
Retail and wholesale	136	9.35	0.014	0.145
Real estate	139	9.55	0.019	0.085
Service	44	3.02	0.045	0.036
News and media	14	0.96	0.006	0.708
Miscellaneous	24	1.65	-0.014	0.258
Total	1455	100.00	0.018	0.000

Panel C: Distribution of bidder returns by firm size

	No of Obs.	% of sample	CAR [-5, +5]	p-value
Small firms	586	40.27	0.021	0.000
Large firms	869	59.73	0.016	0.000
Total	1455	100.00	0.018	0.000

Panel D: Distribution of bidder returns by payment method

	No of Obs.	% of sample	CAR [-5, +5]	p-value
All cash	1311	90.10	0.006	0.008
All stock	87	5.98	0.183	0.000
Other	57	3.92	0.039	0.011
Total	1455	100.00	0.018	0.000

6.2.2.2 Bidder firm industry

Bidder returns were analysed into twelve industry subgroups (finance industry is excluded).

As identified in Panel B below, all industries, except miscellaneous industry, report positive abnormal returns. The miscellaneous industry reports negative and insignificant abnormal

returns. Agriculture, mining, construction, transportation and retail and services industries report significantly positive bidder returns which are above the sample mean returns. Mean bidder returns for the manufacturing industry are significantly positive but lower than the sample mean. Only the miscellaneous industry, reports an insignificant and negative bidder returns.

6.2.2.3 Bidder firm size

Previous studies find that the size of the bidder has a significant impact on the stock performance of bidder firms around announcement date (Moeller et al., 2004). Specifically, research findings suggest that due to agency problem, large firms destroy shareholder value (entrenchment) while small firms create value for bidder firm's shareholders (alignment). To test for this, an alternative statistic was identified representing the size of each bidder relative to the median size of all bidders making the sample period. Each bidder was then assigned a dummy variable depending on whether that bidder is under or over the median size. Mean returns for the under (small firms) and over (large firms) sized bidder were identified. As identified in Panel C below, both large and small bidder firms obtain positive abnormal returns around announcement date. However, small firms obtain higher returns than large firms. Thus, bidder firms' M&A strategies for both sub-categories in the sample create value for shareholders.

6.2.2.4 Payment method

Further analysis of the short-term abnormal returns indicates that bidder shareholders earn positive returns regardless of the payment method used to finance M&A deal (Panel D). All stock M&A deals yield the highest and significant abnormal returns of 18.3% while other methods of payment earn significant returns of 3.9% and all cash deals record the lowest significant returns of 0.6%. Our results are in contrast with the findings of Travlos (1987) that cash-financed M&As yield higher returns than stock-financed M&As and Andrade et al. (2001) that stock financed M&As yield negative returns while cash-financed M&As yield positive returns, suggesting that the use of stock as payment method signals overvaluation of the bidder. Our results, however, indicate that the M&A market in China welcomes stock transactions more favourably than cash announcements. Cash payments subject the bidder to adverse selection, which, in turn, result in an overpayment to the target (Boateng & Bi, 2013).

6.3 Multivariate analysis

Table 6.4 presents the results from the short-term ordinary least squares (OLS) and instrumental variables (IV) results. Model 1 presents the OLS regression results. The OLS results show that there is statistically convincing evidence that state ownership is associated with low abnormal returns while CEO role duality has a significant positive effect on bidder returns. Legal-person and executive ownership have an insignificant effect on bidder returns. Similarly, board size and independent directors have no influence on bidder returns. However, it is clear from the literature that corporate governance is endogenously determined due to omitted variables bias. Consequently, the parameter estimates may be inconsistent and biased. To mitigate endogeneity problem among corporate governance variables, this study adopts an IV approach and statistical inference is based on IV-GMM estimates (Model 6).

6.3.1 Ownership structure and short-term bidder returns

We find very strong evidence to support state and legal-person ownership hypotheses. State ownership records a negative and significant coefficient consistent with our hypothesis. This result may suggest that corporate managers in bidder firms, where the state hold shares, may engage in M&A simply to implement governance policy at the expense of economic objectives. The result is in concert with the Chinese institutional setting that the state is not market oriented and managers are not effectively monitored. Thus, managers who are appointed not on merit, care more about personal benefits that come by towing political party lines. Thus, hypothesis **H2.1** is fully supported in the short-term. This finding is not consistent with Chi et al. (2011) who report a positive state ownership effect on abnormal returns which they attributed to the ability to organise better deals through political connections. We conjecture that the difference between the two studies is due to share tradability during the sample period. Chi et al. (2011), investigated M&A between 1998 and 2003, a period well before the share structural reform during which state-owned shares were not tradable on the stock markets. This study sample period straddles the state shares non-tradable and tradable periods¹⁴.

¹⁴ Share reforms started in 2005 (Li *et al.*, 2011)

Table 6.4: Short-term regression analysis of bidder returns

The table reports the regression results using the OLS, IV-2SLS, IV-LIML and IV-GMM. The dependent variable is the cumulative abnormal return over 11 days around the announcement date (CAR [-5, +5]) calculated using the market model. Independent variables are defined in Table 5.6. An intercept and industry dummy variables are included but not presented. Standard errors are clustered by firm. Coefficients are presented with p-values below in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. To reduce the influence of extreme values, all variables are winsorised at 1st and 99th percentile.

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	1st Stage State Shares	1st Stage Board Ind.	IV-2SLS	IV-LIML	IV-GMM
<i>Ownership structure</i>						
State shares	-0.034*** (0.01)			-0.117*** (0.04)	-0.117*** (0.04)	-0.118*** (0.04)
Legal-person shares	-0.015 (0.01)	-0.641*** (0.02)	0.010 (0.01)	-0.064*** (0.02)	-0.064*** (0.02)	-0.065*** (0.02)
Executive shares	0.067 (0.05)	-0.422*** (0.06)	0.117*** (0.03)	0.035 (0.05)	0.035 (0.05)	0.034 (0.05)
<i>Board structure</i>						
Board size	0.002 (0.00)	0.003 (0.00)	-0.007*** (0.00)	0.001 (0.00)	0.001 (0.00)	0.001 (0.00)
Independent directors	0.009 (0.02)			-0.184** (0.08)	-0.185** (0.08)	-0.185** (0.08)
CEO role duality	0.016* (0.01)	-0.020 (0.02)	0.017** (0.01)	0.017** (0.01)	0.017** (0.01)	0.018** (0.01)
<i>Firm characteristics</i>						
Firm size	-0.000 (0.00)	0.009 (0.01)	0.007*** (0.00)	0.002 (0.00)	0.002 (0.00)	0.002 (0.00)
Financial leverage	0.007 (0.01)	-0.026 (0.02)	-0.007 (0.01)	0.005 (0.01)	0.005 (0.01)	0.005 (0.01)
Tobin's q	0.007 (0.02)	-0.069* (0.04)	0.015 (0.01)	0.008 (0.02)	0.008 (0.02)	0.008 (0.02)
Return on assets	-0.066 (0.06)	0.115 (0.10)	0.002 (0.05)	-0.060 (0.06)	-0.060 (0.06)	-0.060 (0.06)
Stock price run-up	-0.015*** (0.00)	-0.047*** (0.01)	0.005*** (0.00)	-0.018*** (0.00)	-0.018*** (0.00)	-0.018*** (0.00)
Sales growth	0.003 (0.00)	0.009 (0.01)	0.001 (0.00)	0.003 (0.00)	0.003 (0.00)	0.003 (0.00)
<i>Deal characteristics</i>						
High-tech	-0.042** (0.02)	0.097* (0.05)	-0.006 (0.02)	-0.042** (0.02)	-0.042** (0.02)	-0.042** (0.02)
Private target x High deal	0.029 (0.02)	0.086** (0.04)	-0.031* (0.02)	0.031 (0.02)	0.031 (0.02)	0.031 (0.02)
Private target x Low deal	0.033 (0.02)	0.086** (0.04)	-0.023 (0.02)	0.037 (0.02)	0.037 (0.02)	0.036 (0.02)
Private target x All cash	-0.027* (0.02)	-0.064** (0.03)	0.023** (0.01)	-0.028* (0.02)	-0.028* (0.02)	-0.028* (0.02)
Private target x All stock	0.144*** (0.03)	-0.085*** (0.03)	0.019 (0.01)	0.140*** (0.03)	0.140*** (0.03)	0.140*** (0.03)
<i>Instrumental Variables</i>						
Industry sales growth		-0.285*** (0.06)	0.070*** (0.02)			
Industry Tobin's q		0.614*** (0.17)	0.602*** (0.07)			
Post-reform		-0.252*** (0.01)	0.063*** (0.01)			
No. of Obs.	1455	1455	1455	1455	1455	1455

Legal-person ownership records a negative and significant coefficient. This finding supports hypothesis **H2.2** and findings from Chi et al. (2011) study. Chi et al. (2011) attribute the negative effect on abnormal returns to poor management skills, lack of M&A experience and lack of political connections. The results indicate that although legal-person ownership is concerned with value maximisation as is the case with institutional investors, in China, they do not effectively monitor management in specific investment decisions such as M&A. This may suggest that legal-person ownership is overshadowed by state ownership which through its agencies also own about a third of the legal-person shares.

The proportion of executive ownership reports a positive, albeit insignificant, effect on bidder abnormal returns. Thus, there is not sufficient evidence to support hypothesis **H2.3**. The positive coefficient indicates that bidding firms in which executives own shares may have the power to make M&A decisions that increase shareholder wealth. The insignificance influence may be due to the fact that ownership of shares by managers is still very low, at less than 1.0% which is far from the 18.0% at which point the entrenchment effect succeeds the alignment effect (Ruan, Tian, & Ma, 2011).

6.3.2 Board structure and short-term bidder returns

The board structure variables show no support of the stated hypotheses of this study. Interestingly, we find convincing evidence that the addition of independent directors on corporate boards is statistically linked with managers making M&A decisions that do not create value for the shareholders. This may suggest that the appointment of independent directors is de facto a window dressing exercise to comply with regulations. Therefore, the presence of independent directors on the board of directors does not lead to effective monitoring of management thereby ensuring that they make investment decisions that create value for shareholders. This casts doubts on the independence of the independent directors in a Chinese institutional set-up dominated by the state. Thus, hypothesis **H3.2**: there is a positive relationship between independent directors and bidder returns, is not supported.

There is weak evidence that CEO role duality is associated with value creation for the shareholders. The CEO role duality reports a positive and statistically significant effect on bidder returns at 10% level. The result may not be surprising given that China is in the transition from a political and economic system where everything was controlled by the

state to a free market economy where decision making is left to agents. Thus, in support of the stewardship theory, CEO role duality improves managerial accountability in China. This emanates from the socio-political life of the Chinese people that value loyalty, paternalism and collectivism which are consistent with stewardship theory. Thus, hypothesis **H3.3** is not supported.

There is not enough evidence to support hypothesis **H3.1**: there is a positive relationship between board size and bidder returns. Board size reports a positive but statistically insignificant coefficient. The direction of the regression weight offers support to the resource dependency theory that there is a need for large boards in large and complex firms. However, large boards may not have a significant role in influencing M&A decisions as they may lack the requisite skills for directors. They may be appointed to a corporate board as a reward for fervent loyalty to the Chinese Communist Party.

6.3.3 Control variables and short-term returns

Focusing on firm characteristics, only stock price run-up reports significant coefficients at 1% or better significant levels. We find that stock price run-up has a significantly negative coefficient, suggesting that shareholders' wealth is predicted to decrease when a bidder firm's cost to replace its assets is less than the value of its stock. Turning to the deal characteristics, we find that M&A deals of two firms from the information technology industry are associated with low bidder returns.

We partition the method of payment based on the listing status of the target firm to capture the interaction effects of target listing status and the bidder's payment method choice. The results show that acquiring a privately-owned target firm and financing the acquisition using cash resources, may not result in value creation for the shareholders. In contrast, acquiring a private target and financing the acquisition using stock issuance is associated with value creation.

6.4 Robustness results

Robustness tests that examine whether there are any significant changes in the results for the model examined in the section above when an alternative proxy measure is employed were carried out. We present the results of the robustness tests to several alternative specifications such as variant event windows, alternative normal returns estimation model,

using governance index in place of all individual corporate governance variables, and alternative size variable.

6.4.1 Market-adjusted returns model

Bidder returns used for analysis in this study are estimated using the market model. As a robustness check, we also estimate bidder returns using the market-adjusted returns model and the results are presented in Table 6.5. The distribution of daily abnormal returns calculated using the market-adjusted returns model is comparable to the bidder returns calculated using the market model. Bidder returns from market-adjusted returns model over the five-day event window [-5, +5] averages 0.015 and is statistically significant at less than 1% levels. This is consistent with bidder returns from the market model.

We re-estimate the short-term regression in Table 6.5, Model 1 after replacing the market returns model calculated CAR [-5, +5] with the one calculated using the market-adjusted returns model. The coefficient estimates are reported in Table 6.5, Model 5. The results are qualitatively comparable to those reported in Model 1. Thus, our main results are robust to the different models used to calculate abnormal returns.

Table 6.5: Short-term bidder returns using market-adjusted model

Market-Adjusted Returns Model: Cumulative abnormal returns (CAR)							
	No of Obs.	Mean	Standard Deviation	Q1	Median	Q3	p-value
CAR [-1, 0]	1455	0.010	0.046	-0.015	0.003	0.028	0.000
CAR [-1, +1]	1455	0.011	0.063	-0.021	0.001	0.029	0.000
CAR [-2, +2]	1455	0.014	0.081	-0.028	0.000	0.038	0.000
CAR [-5, +5]	1455	0.015	0.107	-0.041	-0.001	0.050	0.000
CAR [-10, +10]	1455	0.013	0.133	-0.059	-0.003	0.056	0.000
CAR [-20, +20]	1455	0.008	0.169	-0.092	-0.011	0.084	0.066

Notes: Cumulative abnormal returns are estimated using the market-adjusted returns model method as in Brown and Warner (1985).

6.4.2 Variant event windows

So far, we have used bidder returns over the eleven-day event window for statistical inferences. Prior research shows that bidder firms obtain different abnormal returns over different event windows (see Appendix A). As a robustness check, we measure bidder returns over different event windows for both the market returns model and the market-adjusted returns model. To isolate the specific impact of the occurrence of M&A deal

announcement, we narrowed the event window from the eleven-day event window to five-day window [-2, +2], three-day window [-1, +1] and two-day window [-1, 0]. To prevent missing some run-up returns especially in the case of insider trading or information leakage before the press release, we widened the event window to twenty-one-day window [-10, +10] and forty-one-day window [-20, +20].

As can be identified from Tables 6.1 and 6.5, abnormal returns around the announcement date over different event windows are positive for both the market model and the market-adjusted returns model. The results enable the study not to reject the null hypothesis, concluding that in the short-term, bidder returns make decisions that enhance shareholder value.

For multivariate analysis, we re-estimate Model 1 in Table 6.5 after replacing the eleven-day event window abnormal returns, CAR [-5, +5] calculated using the market returns model with five-day event window abnormal returns, CAR [-2, +2] as the dependent variable. The coefficient estimates are reported in Table 6.5, Model 4. The results are qualitatively comparable to those reported in Model 1. Thus, our main results are robust to different short-term event windows.

6.4.3 Corporate governance index

Informed by literature, we use the corporate governance index in place of the individual six corporate governance variables. In line with DeFond et al (2005), we construct a summary governance measure by summing the six dichotomous measures for each sample observation and then creating a dichotomous variable based on the median of the summed values. Thus, our summary measure is constructed from an equally weighted aggregation of the six governance characteristics and essentially captures the number of governance characteristics in which each firm is classified as having strong governance. The median value for the summed values is 4.32 and therefore values with values of 4.32 and above were classified as having strong corporate governance while those with values below 4.32 were classified as having weak corporate governance. The results show that 32.03% of the sample firms have weak corporate governance and 67.97% as having strong corporate governance.

We re-estimate the main regression in Table 6.5, Model 1 after replacing ownership and board structure variables with the governance index. The regression analysis reported in

Model 3 shows that the corporate governance index has a positive and insignificant relationship with abnormal returns. The signs and significance of other variables remain unchanged in comparison with Model 1.

Table 6.6: Short-term robustness tests regression analyses

The table reports the robustness checks regression results. For ease of comparison, the main results are presented in Model 1. All models use the generalised moment methods with instruments (IV-GMM). The dependent variable is the market model calculated CAR [-5, +5] for Model 1, Model 2 and Model 3, and CAR [-2, +2] for Model 4. Model 5 uses the market-adjusted model calculated CAR [-5, +5] as the dependent variable. Independent variables are defined in Table 5.2. An intercept and industry dummy variables are included but not presented. Standard errors are clustered by firm. Coefficients are presented with p-values below in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. To reduce the influence of extreme values, all variables are winsorised at 1st and 99th percentile.

	(1)	(2)	(3)	(4)	(5)
<i>Ownership structure</i>					
State shares	-0.118*** (0.04)	-0.118*** (0.04)		-0.075*** (0.03)	-0.107*** (0.04)
Legal-person shares	-0.065*** (0.02)	-0.066*** (0.02)		-0.038** (0.02)	-0.059** (0.02)
Executive shares	0.034 (0.05)	0.033 (0.05)		0.035 (0.04)	0.022 (0.05)
<i>Board structure</i>					
Board size	0.001 (0.00)	0.001 (0.00)		0.001 (0.00)	0.001 (0.00)
Independent directors	-0.185** (0.08)	-0.184** (0.08)		-0.057 (0.06)	-0.147* (0.08)
CEO role duality	0.018** (0.01)	0.017** (0.01)		0.011* (0.01)	0.014* (0.01)
Governance index			0.025 (0.02)		
<i>Firm characteristics</i>					
Firm size	0.002 (0.00)	0.001 (0.00)	0.001 (0.00)	0.002 (0.00)	0.000 (0.00)
Financial leverage	0.005 (0.01)	0.003 (0.01)	0.002 (0.01)	0.005 (0.01)	0.003 (0.01)
Tobin's q	0.008 (0.02)	0.010 (0.02)	0.006 (0.02)	-0.019 (0.01)	0.016 (0.02)
Return on assets	-0.060 (0.06)	-0.055 (0.06)	-0.056 (0.06)	-0.085** (0.04)	-0.034 (0.06)
Stock price run-up	-0.018*** (0.00)	-0.018*** (0.00)	-0.014*** (0.00)	-0.011*** (0.00)	-0.009** (0.00)
Sales growth	0.003 (0.00)	0.003 (0.00)	0.004 (0.00)	0.001 (0.00)	0.004 (0.00)
<i>Deal characteristics</i>					
High-tech	-0.042** (0.02)	-0.041** (0.02)	-0.045*** (0.02)	-0.026* (0.01)	-0.035** (0.02)
Private target x High deal	0.031 (0.02)	0.030 (0.02)	0.029 (0.02)	0.036* (0.02)	0.038 (0.02)
Private target x Low deal	0.036 (0.02)	0.036 (0.02)	0.031 (0.02)	0.036* (0.02)	0.043* (0.02)
Private target x All cash	-0.028* (0.02)	-0.028* (0.02)	-0.024 (0.02)	-0.028** (0.01)	-0.036** (0.02)
Private target x All stock	0.140*** (0.03)	0.140*** (0.03)	0.141*** (0.03)	0.110*** (0.02)	0.132*** (0.03)
No. of Obs.	1455	1455	1455	1455	1455

6.4.4 Alternative firm size measure

Several researchers consider firm size as one of the most important and fundamental firm characteristics that can have a significant impact on a dependent variable. However, the direction and significance of the coefficients of firm size are sensitive to the measures used (Vijh & Yang, 2013). The firm size measure used for analysis in this study is the logarithmic transformation of total sales. As a robustness check, we use the logarithmic transformation of total assets as an alternative measure of firm size. The coefficient estimates are reported in Table 6.5, Model 2. The results are qualitatively comparable to those reported in Model 1. Thus, our main results are robust to firm size measures.

6.5 Summary of research findings

In conclusion, the overall picture of all the research findings and the level of support for the hypotheses with respect to short-term are comprehensively reported in Table 6.7. Results from the event study strongly support hypothesis **H1.1** that bidder firms on average make M&A decisions that enhance shareholder value in the short-term. Concerning ownership structure, the results provide a mixed bag of evidence. Firms in which the state owns shares are associated with shareholder value destruction, significantly confirming hypothesis **H2.1**. Legal-person ownership is not necessarily associated with value creation, strongly supporting hypothesis **H2.2**. There is not enough evidence to support hypothesis **H2.3** that executive ownership in bidder firms leads to value-enhancing decisions.

With regards to board structure, there is not enough evidence to support hypothesis **H3.1** that large boards are associated with high bidder returns and can monitor management effectively if they have the skills and experience requisite of board members. Having independent board members does not necessarily result in good corporate governance if they are not fully independent, strongly rejecting hypothesis **H3.2**. There is not enough evidence to support hypothesis **H3.3** that combining the roles of CEO and Chairperson is associated with value destroying M&A decision.

We also include commonly used control variables for corporate governance–bidder returns relationship that is, firm-specific and deal-specific characteristics. We find that bidder stock price run-up is associated with low abnormal returns and deals combining two high-tech firms are associated with negative bidder returns. Holding the listing status of the target

firm constant, all cash acquisitions are associated with negative bidder returns while all stock deals are associated with higher bidder returns.

Overall, the results show that in China M&A context, bidder firms earn positive abnormal returns in the short-term due to state intervention in M&A activity as player and regulator. Further analysis of factors that drive the market reaction to M&A announcement shows that having state and legal-person ownership in bidder firms, and more independent directors on the board may not result in effective monitoring of management. Other factors, such as pre-announcement bidder returns, listing status and method of payment are also important determinants of abnormal returns in the short-term.

Table 6.7: Summary of short-term findings

The table reports the short-term summary findings. Variables are defined in Table 5.2. The expected sign column shows the expected result as developed in Chapter 4. The short-term result column shows the empirical results using the IV-GMM. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Variables	Hypothesis	Expected sign	Short-term result	Comment on results
<i>Stock performance</i>				
CAR [-5, +5]	H1.1	+***	+***	Very strong evidence
<i>Ownership structure</i>				
State shares	H2.1	-***	-***	Very strong evidence
Legal-person shares	H2.2	-***	-***	Very strong evidence
Executive shares	H2.3	+***	+	Not enough evidence
<i>Board structure</i>				
Board size	H3.1	+***	+	Not enough evidence
Independent directors	H3.2	+***	-**	Strong evidence
CEO role duality	H3.3	-***	+	Not enough evidence

Chapter 7 Long-Term Empirical Results

7.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. While the previous chapter presented the short-term analysis, this chapter presents the long-term analysis. For the long-term, BHAR computed by adopting the size and, size and book-to-market value benchmark represent the shareholder wealth performance over a two-year horizon. The statistical test used for the BHAR is the bootstrapped skewness-adjusted *t*-statistic in the spirit of Lyon et al. (1999). Given the controversies surrounding long-term abnormal returns computation, CTPR computed using the Fama-French and Carhart factors are adopted as a robustness test. In addition, one-year and three-year BHAR are also adopted as a robustness test. To test hypotheses on the impact of corporate governance on bidder returns, IV-GMM cross-sectional regression analysis is used. Considering the possible problem of biased standard errors and non-independence within firms, regression models are estimated using heteroscedasticity and bidder cluster adjusted standard errors in the spirit of White (1980).

This chapter presents the results of the empirical evidence for bidder firms' shareholder wealth in the long-term. The next section provides the characteristics of the sample and distribution of mergers and acquisition by year, industry, method of payment and restructuring type. Bidder returns results are presented in the following section together with its distribution by subsamples. Presentation of the sample summary statistics follows. Next simple and multiple regression analyses results are presented to determine whether corporate governance mechanisms in place a year before M&A announcement can be important determinants in explaining bidder firms' returns around announcement date. The regression results include tests for the impact of firm-specific and deal-specific characteristics on abnormal returns. Robustness tests results for alternative variable measurement follow. The chapter concludes with a summary of the empirical findings.

7.2 Univariate analysis

In this section, summary statistics for the abnormal returns following announcement for bidder firms are presented for both BHAR and CTPA. This is followed by the presentation of the results of the statistical distribution of BHAR. Results of the distribution of BHAR over time follow. The section ends with a presentation of BHAR analysis by the listing status of the target firm, bidder firm industry, firm size and the method of payment.

7.2.1 Buy-and-hold abnormal returns (BHAR)

Long-term abnormal returns were computed as long-term buy-and-hold abnormal returns of sample firms less the long-term buy-and-hold abnormal returns of a reference portfolio (refer to section 5.5.3 and Appendix D for details). Table 7.1 presents the results of the size and, size and book-to-market value of equity-adjusted BHAR where the benchmark contemporaneous return is that of a portfolio of stocks with the book-to-market value ratio and size close to those of the sample firms. The results support the behavioural theory which posits that bidder firms lose value in the long-term because of either managerial hubris or personal utility maximisation where markets are efficient. The results are consistent with prior studies from developed and other developing markets but inconsistent with previous studies on China¹⁵. The result supports this study hypothesis that in the long-term bidder firms lose value as the market adjust to the actual performance of the resultant firm.

The result is a reversal of the gains recorded in the short-term (see Table 6.2). This may suggest the markets overreact to the M&A announcement as they incorporate the information into share prices in the short-term and then adjust the share price as they incorporate actual performance in the long-term (S. Chen, Liu, & Chen, 2014). The investors may display excessive optimism about the potential synergetic gains from M&A deal but revise their judgements based on 'new' information about the acquisition. The negative abnormal returns may also be due to the bidders firm having problems integrating the acquired target thereby incurring more integration costs than synergistic gains after

¹⁵ Prior studies that report positive and significant returns: Boateng and Bi (2013); Chi *et al.*, (2011); Zhou *et al.*, (2012).

M&A announcement (S. P. Lee & Isa, 2012). These results confirm hypothesis **H1.2** that abnormal returns following M&A are negative and significant in the long-term.

Since the 24-month size and market-to-book value adjusted returns event window reports statistically significant BHAR and has been used in prior studies (see Appendix D), the analysis for this study will be based on this event window for the long-term results discussion. We also find that in the sample of 1,455 domestic M&A, the number of acquisitions that experienced negative returns (63.92%) outnumbered those that created shareholder wealth (36.08%). The mean size and market-to-book value adjusted buy-and-hold abnormal returns (SMTBVBHAR [+1, +24]) across all the acquisitions in the sample was -0.249 ($p < 0.001$) suggesting that M&A do not enhance bidder firms' shareholder value in the long-term.

Table 7.1: Long-term bidder returns using buy-and-hold abnormal returns

The table reports the long-term bidder returns and statistical distribution. The two-year post-acquisition period is from 1 to 24 months after announcement. For definitions of the different benchmark models for estimating BHARs and on the construction of the size and book-to-market value benchmark portfolio, see text. The statistical significance is based on bootstrapped critical values.

	Buy-and-hold abnormal returns (BHAR)						
	No of Obs.	Mean	Standard Deviation	Q1	Median	Q3	p-value
<i>Size-adjusted BHAR</i>							
SBHAR [+1, +12]	1455	-0.146	1.458	-0.448	0.003	0.336	0.000
SBHAR [+1, +24]	1455	-0.358	2.829	-0.668	0.007	0.512	0.000
SBHAR [+1, +36]	1455	-0.718	4.301	-1.092	0.013	0.727	0.000
<i>Size and MTBV-adjusted BHAR</i>							
SMTBVBHAR [+1, +12]	1455	-0.097	0.605	-0.292	-0.089	0.118	0.000
SMTBVBHAR [+1, +24]	1455	-0.249	1.249	-0.510	-0.163	0.163	0.000
SMTBVBHAR [+1, +36]	1455	-0.386	1.658	-0.805	-0.281	0.166	0.000

The results also show that there is a large variation in the distribution of abnormal returns among the bidder firms. Size and market-to-book value adjusted bidder returns for the event window [+1, +24] vary in the interval -0.510 and 0.163 . Although the BHAR inter-quartile range is large (0.673), most of the returns are concentrated around the mean (-0.249) over 24-month event window with a standard deviation of 1.249 . This indicates that there is a large amount of M&A performing similarly.

7.2.1.1 Long-term bidder returns analysis by year of announcement

Table 7.2 presents the 24-month SMTBVBHAR over the sample period. The table shows that throughout the sample period bidders obtain negative and significant returns at 10%

level or better except for 2008, 2010 and 2011 which report insignificant returns. The table also shows that abnormal losses after 2007 are lower than the period before. This may be attributed to the effects of the share reforms. These reforms were introduced in 2005 and continue up to the present date. As the pre-reform period was one dominated by non-tradable shares and the post-reform period is one of the tradable shares, it is necessary to ascertain that abnormal returns were affected by market liquidity. This may also suggest an improvement in the efficiency of China markets as they move towards a market economy and therefore reporting comparable results to the US and the UK acquisitions.

Table 7.2: Long-term bidder returns analysis by year of announcement

The table reports the long-term bidder returns by year of announcement. The two-year post-acquisition period is from 1 to 24 months after announcement. For definitions of the different benchmark models for estimating BHARs and on the construction of the size and book-to-market value benchmark portfolio, see text. The statistical significance is based on bootstrapped critical values.

	No of Obs.	% of sample	SMTBVBHAR [+1, +24]	p-value
2002	80	5.50	-0.183	0.001
2003	117	8.04	-0.084	0.019
2004	122	8.38	-0.211	0.006
2005	102	7.01	-2.021	0.000
2006	106	7.29	-0.312	0.087
2007	182	12.51	-0.143	0.001
2008	177	12.16	-0.109	0.112
2009	184	12.65	-0.107	0.045
2010	196	13.47	-0.025	0.345
2011	189	12.99	-0.016	0.639
Total	1455	100.00	-0.249	0.000

7.2.2 Long-term bidder returns analysis by subsample

Table 7.3 presents the results of the short-term bidder returns analysis by different data panels. Panel A presents the distribution of returns by the listing status of the target firm. Panel B presents the distribution of returns by bidder firm size. Panel C presents the distribution of returns by bidder firm size. Lastly, Panel D presents the distribution of returns by the method of payment.

7.2.2.1 Listing status of the target firm

There is evidence from prior research that bidder firms that acquire private target firms earn higher returns than those that acquire public target firms (Masulis et al., 2007; Moeller et al., 2004). To test for this, the sample was divided into two sub-groups: listed (public)

Table 7.3: Long-term distribution of bidder returns by subsamples**Panel A: Distribution of bidder returns by target status**

	No of Obs.	% of sample	SMTBVBAHR [+1, +24]	p-value
Private target	1412	97.04	-0.248	0.000
Public target	43	2.96	-0.284	0.000
Total	1455	100.00	-0.249	0.000

Panel B: Distribution of bidder returns by industry

	No of Obs.	% of sample	SMTBVBAHR [+1, +24]	p-value
Agriculture	24	1.65	-0.210	0.391
Mining	58	3.99	-0.449	0.085
Manufacturing	756	51.96	-0.200	0.000
Utility	102	7.01	-0.222	0.052
Construction	31	2.13	-0.314	0.104
Transportation	65	4.47	-0.737	0.002
Information technology	62	4.26	-0.273	0.044
Retail and wholesale	136	9.35	-0.238	0.007
Real estate	139	9.55	-0.162	0.107
Service	44	3.02	-0.227	0.134
News and media	14	0.96	-0.373	0.514
Miscellaneous	24	1.65	-0.534	0.066
Total	1455	100.00	-0.249	0.000

Panel C: Distribution of bidder returns by firm size

	No of Obs.	% of sample	SMTBVBAHR [+1, +24]	p-value
Small firm	586	40.27	-0.372	0.000
Large firm	869	59.73	-0.166	0.000
Total	1455	100.00	-0.249	0.000

Panel D: Distribution of bidder returns by payment method

	No of Obs.	% of sample	SMTBVBAHR [+1, +24]	p-value
All cash	1311	90.10	-0.253	0.000
All stock	87	5.98	-0.030	0.675
Other	57	3.92	-0.485	0.006
Total	1455	100.00	-0.249	0.000

targets and unlisted (private) targets. As identified in Panel A, bidder firms that acquire listed or non-listed target firms earn negative abnormal returns with those bidding for public targets losing more. This may suggest that the listing status of target firms matter in M&A deals and that acquirers may have difficulties integrating public targets than private targets (S. P. Lee & Isa, 2012; Moeller et al., 2004). Thus, private firm bidders outperform public targets in the long-term.

7.2.2.2 Bidder firm industry

M&A are known to cluster by industry. In China, the clustering of M&A by industry tend to be driven by government policy. The current policy is to consolidate defragmented manufacturing industry to increase international competitiveness and bail out SOEs in financial distress. In that case, M&A are not driven by economic but political or social objectives, meaning not much attention is paid due diligence. In this study, bidder returns were analysed into twelve industry subgroups (finance industry is excluded).

As can be identified in Panel B, all bidder industry classes earn negative and significant abnormal returns at 10% level or better. However, agriculture, construction, real estate, services and, news and media industries report insignificant returns. High and significant shareholder value losses are reported by transportation (-0.737), Miscellaneous (-0.534) and Mining (-0.449). Overall, the results are consistent with the sample findings.

7.2.2.3 Bidder firm size

An analysis of the abnormal returns by the size of the bidder firm shows that both large and small, report significantly negative returns. Panel C shows that large firms record abnormal returns of -0.166 while small firms recorded returns of -0.372 suggesting large firms outperform small firms in the long-term. This is inconsistent with prior studies (Boateng & Bi, 2013; Moeller et al., 2004). This may suggest that in the long-term, large firms are better at integrating targets following acquisitions because of abundant financial resources.

7.2.2.4 Payment method

Further analysis of the long-term abnormal returns indicates that bidder shareholders earn negative returns regardless of the payment method used to pay for the acquisition. Stock paid for acquisitions yield the least albeit, insignificant abnormal returns of -0.030. Acquisitions paid for by cash report a significant loss of -0.253. Our results are inconsistent with the findings of Travlos (1987) that cash-paid acquisitions yield higher returns than stock paid acquisitions. Our results, however, indicate that the M&A market in China welcomes stock acquisitions more favourably than cash paid announcements. This may suggest that cash payments subject the bidder to adverse selection, which, in turn, results in an overpayment to the target (Boateng & Bi, 2013).

Overall, the long-term results indicate that bidder firms' shareholders lose wealth regardless of the listing status of the acquired firms, bidder industry, the method of payment or size of the firm. Finally, but not least, most bidder firm industries' shareholders lose value in the long-term.

7.3 Multivariate analysis

Table 7.4 presents the results from the long-term OLS and instrumental variables (IV) results. Model 1 presents the OLS regression results. The OLS results show that there is strong evidence that state and legal-person ownership are associated with low abnormal returns while independent director has a significant negative effect on bidder returns. Executive ownership has insignificant effect on bidder returns. Similarly, board size and CEO role duality have no influence on bidder returns. However, it is clear from literature that corporate governance is endogenously determined due to omitted variables bias. Consequently, the parameter estimates may be inconsistent and biased. To mitigate endogeneity problem among corporate governance variables, this study adopts an IV approach and statistical inference is based on IV-GMM estimates (Model 6).

7.3.1 Ownership structure and long-term bidder returns

We find that the ownership structure variables play a pivotal role in the corporate governance-bidder returns relationship in the long-term. The results in Table 7.4, Model 6 show that the three ownership structure variables strongly influence abnormal returns in the long-term. There is a negative and economically significant relationship between state shares and abnormal returns consistent with short-term results. This indicates that bidder firms with state-owned shares do not necessarily create shareholder value in the long-term in support of hypothesis **H2.1**. The results are not surprising given that firms with state ownership engage in M&A activity in response to state directives and not based on economic objectives. Thus, investors adjust their perception based on actual performance of the M&A resultant firm. Similarly, findings on the impact of legal-person ownership suggest that such ownership has a negative and significant effect on M&A in support of hypothesis **H2.2**. This is also consistent with the short-term results. This may suggest that legal-person shareholders' decisions based on economic objectives are often overridden by the dominant state.

Table 7.4: Long-term regression analysis of bidder returns

The table reports the regression results using the OLS, IV-2SLS, IV-LIML and IV-GMM. The dependent variable is the 24-month size and market-to-book-value adjusted buy-and-hold abnormal return. Independent variables are defined in Table 5.2. An intercept and industry dummy variables are included but not presented. Standard errors are clustered by firm. Coefficients are presented with p-values below in parentheses. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. To reduce the influence of extreme values, all variables are winsorised at 1st and 99th percentile.

	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	1st Stage State Shares	1st Stage Board Ind.	2nd Stage IV-2SLS	2nd Stage IV-LIML	2nd Stage IV-GMM
<i>Ownership structure</i>						
State shares	-0.742*** (0.16)			-3.609*** (0.74)	-3.609*** (0.74)	-3.589*** (0.72)
Legal-person shares	-0.622*** (0.19)	-0.641*** (0.02)	0.010 (0.01)	-2.364*** (0.50)	-2.364*** (0.50)	-2.349*** (0.49)
Executive shares	0.002 (0.30)	-0.422*** (0.06)	0.117*** (0.03)	-1.710*** (0.50)	-1.710*** (0.50)	-1.701*** (0.49)
<i>Board structure</i>						
Board size	0.015 (0.02)	0.003 (0.00)	-0.007*** (0.00)	0.021 (0.02)	0.021 (0.02)	0.021 (0.02)
Independent directors	-0.584* (0.32)			-2.979** (1.22)	-2.980** (1.22)	-2.936** (1.18)
CEO role duality	0.041 (0.10)	-0.020 (0.02)	0.017** (0.01)	0.008 (0.10)	0.008 (0.10)	0.008 (0.10)
<i>Firm characteristics</i>						
Firm size	-0.011 (0.03)	0.009 (0.01)	0.007*** (0.00)	-0.001 (0.04)	-0.001 (0.04)	-0.001 (0.04)
Financial leverage	-0.148 (0.20)	-0.026 (0.02)	-0.007 (0.01)	-0.115 (0.20)	-0.115 (0.20)	-0.118 (0.20)
Tobin's q	-0.000 (0.23)	-0.069* (0.04)	0.015 (0.01)	-0.226 (0.26)	-0.226 (0.26)	-0.224 (0.26)
Return on assets	2.725* (1.40)	0.115 (0.10)	0.002 (0.05)	2.807** (1.42)	2.807** (1.42)	2.761** (1.38)
Stock price run-up	-0.100*** (0.03)	-0.047*** (0.01)	0.005*** (0.00)	-0.207*** (0.05)	-0.207*** (0.05)	-0.206*** (0.05)
Sales growth	0.014 (0.03)	0.009 (0.01)	0.001 (0.00)	0.030 (0.04)	0.030 (0.04)	0.029 (0.04)
<i>Deal characteristics</i>						
High-tech	-0.118 (0.27)	0.097* (0.05)	-0.006 (0.02)	0.008 (0.30)	0.008 (0.30)	0.009 (0.30)
Private target x High deal	-0.079 (0.23)	0.086** (0.04)	-0.031* (0.02)	0.082 (0.26)	0.082 (0.26)	0.079 (0.26)
Private target x Low deal	-0.095 (0.22)	0.086** (0.04)	-0.023 (0.02)	0.096 (0.26)	0.096 (0.26)	0.092 (0.25)
Private target x All cash	0.086 (0.20)	-0.064** (0.03)	0.023** (0.01)	-0.037 (0.21)	-0.037 (0.21)	-0.033 (0.21)
Private target x All stock	0.324 (0.20)	-0.085*** (0.03)	0.019 (0.01)	0.016 (0.23)	0.016 (0.23)	0.020 (0.23)
<i>Instrumental Variables</i>						
Industry sales growth		-0.285*** (0.06)	0.070*** (0.02)			
Industry Tobin's q		0.614*** (0.17)	0.602*** (0.07)			
Post-reform		-0.252*** (0.01)	0.063*** (0.01)			
No. of Obs.	1455	1455	1455	1455	1455	1455

Executive ownership has a negative and significant effect on bidder returns indicating that bidder firms in which executive own shares make acquisitions that may result in lower returns. Thus, there is very strong evidence to reject hypothesis **H2.3**. This may suggest that because of negligible shareholding, no close monitoring and that most of the managers are state appointees and measured on social and political performance rather than profitability, they are motivated by empire building and social status. The long-term executive shares effect on bidder returns result is inconsistent with the short-term findings. This may be because the role of managers becomes clearer in the long-term as they are judged on actual rather than potential performance.

7.3.2 Board structure and long-term bidder returns

Turning to board structure variables, independent directors report a negative and significant effect on bidder returns. This may suggest that adding outside and independent directors on corporate boards does not improve management monitoring. There is strong evidence to reject hypothesis **H3.2**, that independent directors have a positive relationship with bidder returns. Board size and CEO role duality were found not to have a significant effect on the abnormal returns. Board structure measures of board size and CEO role duality record positive effects on abnormal returns. Although not significant, the results may suggest that large and combining the roles of CEO and chairperson of the board provide some control mechanisms in M&A decisions. Thus, there is not enough evidence to support hypotheses **H3.1** and **H3.3**.

7.3.3 Control variables and long-term bidder returns

Among the firm-specific characteristics, only the past performance variables report significant relationships with bidder returns. Evidence on past firm performance proxied by return on assets and stock price run-up show that they exert opposite effects on abnormal returns. There is very strong evidence that share price volatility is negatively perceived by the markets. High abnormal returns twelve months before acquisition announcement is associated with low abnormal returns. Conversely, there is convincing evidence that bidder firms that record high return on assets are associated with high abnormal returns. Of interest is that our results show that no deal-specific characteristics exert any influence on bidder returns in the long-term.

7.4 Robustness results

As in Chapter 6, robustness tests that examine whether there are any significant changes in the results for the model examined in section above when an alternative proxy measure is employed were also carried out. In this section, we present results of the robustness tests to several alternative specifications such as variant event windows, alternative normal returns estimation model and governance index in place of all individual corporate governance variables.

7.4.1 Calendar time portfolio returns approach (CTPR)

Table 7.5 shows the weighted least squares regression (WLS) results for the event portfolios. The weights applied in WLS are the number of event firms in each calendar monthly event. Panel A presents equal-weighted results and Panel B presents the value-weighted results.

Panel A shows the value-weighted calendar time portfolio regression results for the three-factor and four-factor models. The results show that the intercept (constant) from the 3-factor and the 4-factors models are negative and significant for the 12-month, 24-month and 36-month event windows. Thus, this finding suggests that the portfolio monthly mean returns of bidder firms in the 12-month, 24-month and 36-month event windows are statistically and economically significant. This is consistent with our findings illustrated in Table 7.1.

Panel B shows the value-weighted calendar time portfolio regression results for the three-factor and four-factor models. As above, the VW bidder portfolio exhibits statistically and economically significant negative mean abnormal returns across the regression models. The results show a decrease in bidder returns for both the 3-factor and 4-factor models compared to EW results. This is consistent with our findings illustrated in Table 7.1.

The calendar-time portfolio returns regression results support the findings from BHAR method that M&A do not create value for the bidder firm shareholders in the long-term. Although the magnitude of the calendar-time portfolio abnormal returns is slightly different from the BHARs, this was expected. Evidence from literature indicates that different methods have different powers of detecting abnormal performance and therefore should be differences in abnormal return estimates across different methodologies (e.g. see, Fama & French, 1993; Loughran & Ritter, 2000).

Table 7.5: Long-term bidder returns using calendar time portfolio returns

This table presents the bidder return results for the 12-month, 24-month and 36-month post acquisitions horizons of 1,455 Chinese acquisitions announced between 2002 and 2011. Panel A presents equal weighted results and Panel B presents the value weighted results. The portfolio excess returns are regressed on the Fama-French factors and the Carhart momentum factor as follows: $R_{pt} - R_f = \alpha + \beta_1(R_m - R_f) + \beta_2(SMB_t) + \beta_3(HML_t) + \beta_4(WML_t) + \varepsilon_t$. The four factors are as follows: zero-investment portfolios representing excess return on the market, $R_m - R_f$, the difference between a portfolio of “small” and “big” stocks, SMB , the difference between a portfolio of “high” and “low” book-to-market stocks, HML , and difference between a portfolio of “winner” and “loser” stocks, WML . Abnormal return is captured by the intercept of each regression. In parentheses are standard errors adjusted for heteroscedasticity (White, 1980) and bidder clustering. *, ** and *** stand for statistical significance based on two-sided tests at the 10%, 5% and 1% level, respectively.

Panel A: WLS Calendar Time Portfolio Regression Results - Equal Weighted Regressions

	SMTBVBHAR [+1, +12]		SMTBVBHAR [+1, +24]		SMTBVBHAR [+1, +24]	
	WLS-3 Factor	WLS-4 Factor	WLS-3 Factor	WLS-4 Factor	WLS-3 Factor	WLS-4 Factor
Rm-Rf	1.064*** (0.03)	1.065*** (0.03)	1.067*** (0.04)	1.069*** (0.04)	1.059*** (0.04)	1.061*** (0.04)
SMB	0.017 (0.02)	0.011 (0.02)	0.005 (0.02)	-0.011 (0.02)	0.007 (0.02)	-0.005 (0.02)
HML	0.055** (0.02)	0.049* (0.03)	0.028 (0.02)	0.014 (0.02)	0.020 (0.02)	0.010 (0.02)
WML		0.003 (0.01)		0.007 (0.01)		0.005 (0.01)
Constant	-28.130*** (0.41)	-28.112*** (0.44)	-28.351*** (0.37)	-28.298*** (0.40)	-28.407*** (0.33)	-28.362*** (0.36)
Observations	130	130	142	142	154	154
Adjusted R^2	0.92	0.92	0.92	0.92	0.93	0.93

Panel B: WLS Calendar Time Portfolio Regression Results - Value Weighted Regressions

	SMTBVBHAR [+1, +12]		SMTBVBHAR [+1, +24]		SMTBVBHAR [+1, +24]	
	WLS-3 Factor	WLS-4 Factor	WLS-3 Factor	WLS-4 Factor	WLS-3 Factor	WLS-4 Factor
Rm-Rf	0.171*** (0.06)	0.163** (0.07)	1.104*** (0.04)	1.101*** (0.04)	1.084*** (0.04)	1.081*** (0.04)
SMB	0.075 (0.12)	0.046 (0.12)	-0.054 (0.08)	-0.071 (0.08)	-0.044 (0.07)	-0.062 (0.07)
HML	-0.011 (0.08)	-0.048 (0.08)	0.077 (0.06)	0.058 (0.06)	0.066 (0.05)	0.048 (0.05)
WML		0.049** (0.02)		0.026 (0.02)		0.028 (0.02)
Constant	-27.182*** (0.62)	-27.028*** (0.63)	-28.418*** (0.35)	-28.336*** (0.34)	-28.436*** (0.31)	-28.347*** (0.30)
Observations	130	130	142	142	154	154
Adjusted R^2	0.10	0.11	0.92	0.92	0.93	0.93

In summary, both calendar-time portfolio abnormal returns, which account for the cross-correlation of event firm returns, and buy-and-hold abnormal returns support the hypothesis that acquirers create significant losses for shareholders in the long-term as the markets adjust for actual results over time.

7.4.2 Size-adjusted abnormal returns

Bidder returns used for analysis in this study are estimated using the size and market to book benchmark. As a robustness check, we also estimate bidder returns using the size-adjusted benchmark and the results are presented in Table 7.1. The distribution of the abnormal returns calculated using the size-adjusted benchmark is comparable to the bidder returns calculated using the size and market-to-book-value adjusted benchmark. Bidder returns from size-adjusted benchmark over 24 months after the acquisition, SBHAR [+1, +24] averages -0.358 and is statistically significant at less than 1% levels. This is consistent with bidder returns from the size and market-to-book-value adjusted benchmark returns.

We re-estimate the long-term regression in Table 7.6, Model 1 after replacing the size and market-to-book-value adjusted benchmark, SMTBVBHAR [+1, +24] with the size-adjusted benchmark, SBHAR [+1, +24]. The coefficient estimates are reported in Table 7.6, Model 5. The results are qualitatively comparable to those reported in Model 1 but somewhat stronger evidence for financial leverage, stock price run-up and high-tech deals. We observe that leverage has a negative and significant effect on returns, suggesting that it has some power in preventing managers from making value destroying M&A deals. We also observe that stock price run-up has a positive and significant effect on returns, suggesting that returns are higher for overvalued bidder firms. We also find that returns are significantly lower in deals combining two firms from the information technology industries. Thus, our main results are robust to the different models used to calculate abnormal returns.

7.4.3 Variant event windows

So far, we have used bidder returns twenty-four months after M&A announcement for statistical inferences. Prior research shows that bidder firms obtain different abnormal returns over different event windows (see Appendix A). As a robustness check, we measure bidder returns over different event windows for both the size-adjusted returns model and the size and market-to-book-value adjusted returns model. First, the long-term event window was shortened to twelve months. Second, the event window was extended to thirty-six months.

Table 7.6: Long-term robustness tests regression analysis

The table reports the robustness checks regression results. For ease of comparison, the main results are presented in Model 1. All models use the generalised moment methods with instruments (IV-GMM). The dependent variable is the size and market-to-book-value adjusted buy-and-hold abnormal return (SMTBVBHAR [+1, +24] for Model 1, Model 2 and Model 3, and SMTBVBHAR [+1, +36] for Model 4. Model 5 uses the size-adjusted buy-and-hold abnormal return SBHAR [+1, +24] as the dependent variable. Independent variables are defined in Table 5.2. An intercept and industry dummy variables are included but not presented. Standard errors are clustered by firm. Coefficients are presented with p-values below in parentheses. The statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. To reduce the influence of extreme values, all variables are winsorised at 1st and 99th percentile.

	(1)	(2)	(3)	(4)	(5)
<i>Ownership structure</i>					
State shares	-3.589*** (0.72)	-3.601*** (0.73)		-3.289*** (0.83)	4.058*** (1.16)
Legal-person shares	-2.349*** (0.49)	-2.364*** (0.48)		-2.071*** (0.52)	2.736*** (0.70)
Executive shares	-1.701*** (0.49)	-1.717*** (0.49)		-1.340*** (0.46)	2.764*** (0.92)
<i>Board structure</i>					
Board size	0.021 (0.02)	0.021 (0.02)		0.010 (0.03)	-0.012 (0.05)
Independent directors	-2.936** (1.18)	-2.926** (1.19)		-0.879 (1.46)	0.543 (2.09)
CEO role duality	0.008 (0.10)	0.007 (0.10)		0.042 (0.12)	0.187 (0.22)
Governance index			0.730** (0.30)		
<i>Firm characteristics</i>					
Firm size	-0.001 (0.04)	-0.010 (0.04)	0.003 (0.03)	-0.047 (0.05)	-0.083 (0.07)
Financial leverage	-0.118 (0.20)	-0.118 (0.20)	-0.293 (0.23)	-0.547** (0.22)	-0.675* (0.38)
Tobin's q	-0.224 (0.26)	-0.208 (0.26)	-0.114 (0.27)	-0.276 (0.32)	0.737 (0.55)
Return on assets	2.761** (1.38)	2.791** (1.35)	2.253 (1.49)	0.072 (0.79)	0.739 (1.63)
Stock price run-up	-0.206*** (0.05)	-0.206*** (0.05)	-0.036 (0.03)	-0.082 (0.06)	0.162** (0.08)
Sales growth	0.029 (0.04)	0.029 (0.04)	0.026 (0.04)	0.029 (0.03)	-0.001 (0.06)
<i>Deal characteristics</i>					
High-tech	0.009 (0.30)	0.012 (0.30)	0.068 (0.32)	-0.725** (0.33)	-2.053*** (0.75)
Private target x High deal	0.079 (0.26)	0.076 (0.26)	-0.001 (0.26)	0.057 (0.28)	-0.636 (0.73)
Private target x Low deal	0.092 (0.25)	0.093 (0.25)	-0.012 (0.26)	0.104 (0.28)	-0.627 (0.75)
Private target x All cash	-0.033 (0.21)	-0.031 (0.21)	0.064 (0.23)	0.052 (0.21)	0.805 (0.65)
Private target x All stock	0.020 (0.23)	0.015 (0.23)	0.199 (0.25)	0.016 (0.25)	1.241* (0.70)
No. of Obs.	1455	1455	1455	1455	1455

Table 7.1, Panel A shows that long-term abnormal returns adjusted for size, for 12-month, 24-month and 36-month event windows are negative and statistically significant. Results in Table 7.1, Panel B shows that bidder returns for the 12-month, 24-month and 36-month event windows are also negative and statistically significant. Thus, this evidence indicates that bidder shareholders lose value in the long-term for horizons of up to three years. Again, the results enable the study not to reject the null hypothesis that M&A do not create value for the shareholders in the long-term.

For multivariate analysis, we re-estimate Model 1 in Table 7.6 after replacing the 24-month abnormal returns, SMTBVBHAR [+1, +24] calculated using the size and market-to-book-value adjusted benchmark with 36-month abnormal returns, SMTBVBHAR [+1, +36] as the dependent variable. The coefficient estimates are reported in Table 7.6, Model 4. The results are qualitatively comparable to those reported in Model 1 but somewhat stronger evidence for financial leverage and high-tech deals. We observe that leverage has a negative and significant effect on returns, suggesting that it has some power in preventing managers from making value destroying M&A deals. We also find that returns are significantly lower in deals combining two firms from the information technology industries.

7.4.4 Corporate governance index

Informed by literature, we use the corporate governance index in place of the individual six corporate governance variables. In line with DeFond et al (2005), we construct a summary governance measure by summing the six dichotomous measures for each sample observation and then creating a dichotomous variable based on the median of the summed values. Thus, our summary measure is constructed from an equally weighted aggregation of the six governance characteristics and essentially captures the number of governance characteristics in which each firm is classified as having strong governance. The median value for the summed values is 4.32 and therefore values with values of 4.32 and above were classified as having strong corporate governance while those with values below 4.32 were classified as having weak corporate governance. The results show that 32.03% of the sample firms have weak corporate governance and 67.97% as having strong corporate governance.

We re-estimate the main regression in Table 7.6, Model 1 after replacing ownership and board structure variables with the governance index constructed by combining the

individual corporate governance variables using the median values of these variables. The regression analysis reported in Model 3 shows that the corporate governance index has a positive and an economically strong relationship with abnormal returns suggesting that bidder returns are higher for firms with strong corporate governance mechanisms. This confirms that overall; corporate governance reform may have the intended outcomes as far as monitoring and controlling corporate managers is concerned in China. The signs and significance of other variables remain unchanged in comparison with Model 1.

7.4.5 Alternative firm size measure

Several researchers consider firm size as one of the most important and fundamental firm characteristics that can have a significant impact on a dependent variable. However, the direction and significance of the coefficients of firm size are sensitive to the measures used (Vijh & Yang, 2013). The firm size measure used for analysis in this study is the logarithmic transformation of total sales. As a robustness check, we use the logarithmic transformation of total assets as an alternative measure of firm size. The coefficient estimates are reported in Table 7.6, Model 2. The results are qualitatively comparable to those reported in Model 1. Thus, our main results are robust to firm size measures.

7.5 Summary of research findings

The overall picture of all the research findings and the level of support for the hypotheses with respect to long-term are comprehensively reported in Table 7.7. Results from the event study and calendar time portfolio model strongly support hypothesis **H1.2** that bidder firms on average earn negative and significant abnormal returns post-acquisition due to share price adjustments based on actual performance and problems in integrating different organisational cultures.

Concerning corporate governance, the results provide strong evidence that it plays a vital role in influencing M&A performance in the long-term. State shares exert a negative effect on bidder returns in support of hypothesis **H2.1** and consistent with short-term results. Similarly, legal-person shares are associated with low bidder returns in support of hypothesis **H2.2** and consistent with short-term results. Interestingly, executive shares are associated with low returns, strongly rejecting hypothesis **H2.3** and inconsistent with short-term results. Independent directors are associated with ineffective monitoring of

management, thus rejecting hypothesis **H3.2**. There is not enough evidence in support of hypotheses **H3.1 and H3.3** in the long-term.

With regards to firm-specific and deal-specific characteristics, we find that bidder firms with a good record of profitability as proxied by return on assets are associated with higher abnormal returns while pre-announcement stock price run-up has a negative effect on bidder returns.

Overall, the long-term bidder returns results illustrate that bidder shareholders lose value post-acquisition as share prices adjust to the actual firm performance. Analysis of the factors driving the share price changes in the long-term indicates that ownership structure and having more independent directors on the board are associated with low bidder returns. Past firm performance proxied by return on assets (positive) and stock price run-up (negative) show that they exert opposite effects on abnormal returns.

Table 7.7: Summary of long-term findings

The table reports the long-term summary findings. Variables are defined in Table 5.2. The expected sign column shows the expected result as developed in Chapter 4. The long-term result column shows the empirical results using the IV-GMM. The statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively. To reduce the influence of extreme values, all variables are winsorised at 1st and 99th percentile.

Variables	Hypothesis	Expected sign	Long-term result	Comment on results
<i>Stock performance</i>				
SMTBVBHAR [+1, +24]	H1.2	-***	-***	Very strong evidence
<i>Ownership structure</i>				
State shares	H2.1	-***	-***	Very strong evidence
Legal-person shares	H2.2	-***	-***	Very strong evidence
Executive shares	H2.3	+***	-	Not enough evidence
<i>Board structure</i>				
Board size	H3.1	+***	+	Not enough evidence
Independent directors	H3.2	+***	-***	Very strong evidence
CEO role duality	H3.3	-***	+	Not enough evidence

Chapter 8 Conclusion

8.1 Introduction

This study investigates how corporate governance and M&A activity are intertwined in a Chinese setting. This chapter provides concluding remarks and integrates the various facets raised in earlier chapters of this study, from literature review to empirical results. Relevant literature review on corporate governance influence on bidder returns and institutional setting in China was carried out in Chapter 2 and 3. Two Research Questions were formulated and eight testable hypotheses were developed in Chapter 4. Data selection, methods and variables were introduced and defined in Chapter 5. The empirical results were presented and discussed in Chapter 6 and 7. In addition, this chapter discusses the limitations and makes suggestions for future research, respectively.

The chapter is partitioned into seven sections. In section 8.2, the Research Questions are restated. In section 8.3, the methodologies applied in the study are revisited. In section 8.4, the results of the study are discussed. Section 8.5 details the contributions of the research to the body of knowledge. In section 8.6 limitations of the study are identified and discussed. Section 8.7 makes suggestions for future research that could develop from this study. Finally, section 8.8 provides the conclusion for the chapter and thesis.

8.2 Research Questions

Following the introduction of economic reforms in 1978, China has witnessed rapid and steady economic growth. This inevitably resulted in the rationalisation and the need for resources including the corporate capital. After the establishment of the Shanghai and Shenzhen Stock Exchanges in the early, 1990s, the Chinese government encouraged M&A to reduce the national debt burden of state-owned enterprises (SOEs) and to open traditionally restricted industries, making them more competitive. Despite the late development of M&A activity, M&A have been and continue growing at phenomenal rates since its introduction in 1993. Per the CSMAR database, from the year 2001 to 2014, China's M&A activity grew by 462.20% in terms of the number of transactions and 116.30% in terms of the value of the transactions. As the world's second largest economy celebrates an unprecedented growth in M&A activity, it is important of find out whether M&A create or destroy value for the shareholders Recent studies document value-creation

for the bidding firm's shareholder around announcement date (Chi et al., 2011; L. Huang, 2010b; S. Li et al., 2011; Z. Ning, 2009; Shen, 2008). However, the picture is not so clear for long-term studies. Boateng and Bi (2013), Chi et al. (2011) and Zhou et al. (2012) document value-creation post-acquisition. A more recent study by E. L. Black et al. (2013) report value-destroying post-acquisitions. This leads to the following Research Question, in both short-term and long-term:

Research Question 1: *Are M&A associated with value creation in China?*

While M&A take place for economic reasons that intend to increase shareholder wealth, practically many reduce shareholder wealth (King, Dalton, Daily, & Covin, 2004; Tuch & O'Sullivan, 2007). One explanation is that ineffective corporate governance mechanisms to monitor and control managerial behaviour, result in managers engaging in wealth reducing M&A. In concert with this explanation, the Chinese government introduced the Code of Corporate Governance (2001) in line with international best governance practice. This has strengthened investor confidence and reinforced the economic sustainability of Chinese enterprises. Despite accolades from the World Bank and International Monetary Fund, serious problems still exist in various aspects of Chinese institutions and practices (Y. Huang et al., 2005). A study conducted by the Canada's Centre for International Governance Innovation in 2006 rate China first out of ten Asian economies in adopting the OECD governance principles (Liang & Useem, 2009). However, the study rated China ninth of ten on the actual governance practices. Ownership of listed firms is still overwhelmingly dominated by state ownership. This problem evolved from the planned economy principles and is set to improve because of the on-going share reform. Another problem is the immaturity of the market economy, including the absence of corporate debt market. This problem may remain unchanged for the foreseeable future. As the impact of these reforms continues, it is of paramount importance to understand the impact of corporate governance on shareholder value in a Chinese setting.

Though some studies on China exist (Chi et al., 2011; Pukthuanthong-Le & Visaltanachoti, 2009b) none of them has studied the effect of corporate governance on both short-term and long-term abnormal returns. In this study, we use corporate governance variables unique to China; state ownership and legal person ownership and board structure variables derived from prior studies from other countries; board size, independent directors and CEO role duality. This leads to the following Research Question, in both short-term and long-term:

Research Question 2: *What are the effects of corporate governance on bidder returns in China?*

8.3 Research methods

We examined the performance of M&A announcements by studying the short-term and long-term shareholder wealth performance in a univariate setting and multivariate framework which we control for other factors that may affect abnormal returns around and following the announcement.

For the short-term shareholder wealth performance, the event study methodology applied is based on studies conducted by Brown and Warner (1985). We calculated short-term bidder returns using the market model for the primary tests and the market-adjusted returns model as a robustness test over an eleven-day event window. For the long-term analysis of shareholder wealth performance, we applied the event study methodology based on studies by Lyon et al. (1999), Barber and Lyon (1997) and Kothari and Warner (1997) that control for *rebalancing* and *new listing* biases. Given the controversies surrounding the measurement of long-term abnormal returns, we used two alternative measures: We calculated bidder returns using size and, size and market-to-book value adjusted as reference portfolio for the primary tests and calendar time portfolio returns based on Fama and French (1993) and Carhart (1997) as a robustness test (Bouwman et al., 2009). Since long-term abnormal returns are positively skewed and that sample observations are not independent, we drew inferences based on bootstrapped adjusted t-statistics (Bouwman et al., 2009). For reliability of the results produced, we shortened the event window and increased the event window to further assess the impact M&A announcement has upon the gains created.

In addition, we explored possible explanations for the shareholder wealth effects regarding corporate governance while controlling for firm-specific and deal-specific characteristics. This study adopted an instrumental variables (IV) approach to dealing with the potential endogeneity among corporate governance variables. Although prior research implicitly acknowledges the existence of endogeneity, the literature does not consistently account for it using formal econometric methods.

8.4 Empirical results

To answer the above Research Questions, testable hypotheses were developed from the literature review and institutional setting in China review. To answer Research Question 1, two hypotheses, H1.1 and H1.2 were developed, focusing on the shareholder wealth performance in the short-term and long-term respectively. Six hypotheses were developed to answer Research Question 2 focusing on corporate governance of bidder firms. Three hypotheses, H2.1, H2.2 and H2.3 focused on the ownership structure while the other three hypotheses H3.1, H3.2 and H3.3 focused on board structure. The remainder of this section discusses the results and implications for each of the hypotheses for the short-term and long-term separately.

8.4.1 Short-term abnormal returns

To answer Research Question 1, hypothesis H1.1 was developed which states that the abnormal returns around the announcement date are positive and significant. The findings of this study indicate that abnormal returns around the eleven-day event window are positive and significant (see Table 6.2). Robustness tests using variant event windows and an alternative market-adjusted returns model (see Table 6.2) also provide strong support for hypothesis H1.1. This suggests that domestic M&A deals create value for the shareholders as the market reacts positively to the announcement taking it as ‘good news’, lending support to the neoclassical theories. However, the positive returns may be an indication that the state sponsored on-going consolidation process is positively viewed by investors, and that managers are motivated by the synergetic gains resulting from the deal. Also, the unique institutional settings and corporate governance arrangements may explain the difference in market reaction to M&A announcements in the short-term (G. Johnson et al., 2005; Kale, 2004; La Porta et al., 1999).

In China, it has also been noted that M&A decisions and share prices are not only motivated by economic considerations but also non-economic forces such as politics or even rumours (Z. Ning, 2009). First, the M&A market is still in its infancy hence, less competitive leading to bidder firms being able to purchase targets at lower prices. Second, the state views M&A activity as a key driver of the restructuring process, particularly, privatisation of SOEs. Therefore, the state becomes directly involved during the process as well as in the regulations that shape the form of the majority M&A activities, limiting the bargaining

power of the target firms. Given that most of the M&A deals are negotiated, the state wields more power and therefore negotiates from an advantageous position. Private targets (who constitute most of the target firms) are then cowed into accepting lower valuations for their firms for fear of political reprisals. Third, the unique corporate structure and culture are vastly different from those in the developed economies and as such, market forces may not be an effective form of discipline on managers.

8.4.2 Corporate governance and short-term bidder returns

Research Question 2 assesses the impact of corporate governance on the short-term bidder returns. To answer this question, hypotheses subdivided into ownership and board structures were developed.

Hypothesis H2.1 states that state ownership is negatively related to bidder returns around the announcement date. The results indicate that state ownership is negatively and significantly related to abnormal returns. The results suggest that state ownership does not necessarily translate to superior shareholder value (section 6.3.1). This finding is inconsistent with studies from China that suggest firms in which the state own shares are in a favourable position due to political connectedness, can organise favourable deals and get preferential treatment in terms of financial support from state-owned banks (section 2.6.1). One possible explanation for this negative and significant finding is that active block holders such as the state do not employ managers skilled in evaluating the firms' initiatives such as M&A (section 3.4.4). Many a time, managers are appointed not because of their skills but on political allegiance. Also, state agency managers tasked with monitoring state-owned shares may be somewhat reluctant to question M&A related decisions made by firm management, for fear of being reprimanded by their bosses who may have a political relationship with the acquiring firm managers (section 3.4.5). Most M&A decisions are therefore motivated by empire bulding and, social and political status enhancement (section 2.3.2). This may be because most of the acquired firms are privately-owned whose information is not publicly available and will only become available after the deal is completed.

Hypothesis H2.2 states that legal-person ownership is negatively related to short-term abnormal returns. The results indicate that the relationship between legal-person ownership and abnormal returns is negative and significant strongly supporting H2.2. The negative

effect on bidder returns is consistent with Chi et al. (2011) who find a negative and significant effect on abnormal returns. The results indicate that lack of managerial and M&A experience, skills and political connections may contribute to low abnormal returns in the long-term. However, it is not consistent with studies from more mature economies of the US and the UK (Masulis et al., 2007; Sudarsanam et al., 1996) who report a positive effect of institutional ownership on bidder returns. The difference between these studies and this study may be that China's M&A market has unique characteristics such as strong state presence both as regulator and player.

The relationship between executive ownership and short-term abnormal returns is examined by hypothesis H2.3 which states the executive ownership is positively related to abnormal returns. This study found not enough evidence to support hypothesis H2.3.

There is strong evidence that CEO role duality is associated with high bidder returns. The result may not be surprising given that China is in the transition from a political and economic system where everything was controlled by the state to a free market economy where decision making is left to agents. Thus, in support of the stewardship theory, CEO role duality improves managerial accountability in China. Thus, hypothesis H3.3 is supported in the short-term.

Interestingly, we find strong evidence that the addition of independent directors on corporate boards is statistically linked with managers making M&A decisions that do not create value for the shareholders. This may suggest that the appointment of independent directors is de facto a window dressing exercise to comply with regulations. In such cases, the independent directors may possess little knowledge about the business and tend to stifle managerial strategic actions through excessive supervision. Thus, hypothesis H3.2 is not supported in the short-term.

Empirical results from cross-sectional regression reported a positive but not significant effect of board size on abnormal returns. Thus, there is not enough evidence to support hypothesis H3.1 that board size is positively related to abnormal returns.

In this study, we control for firm-specific and deal-specific variables that prior empirical studies have demonstrated are important in explaining the bidder returns. Specifically, this study controls for firm size, financial leverage, pre-announcement stock returns, past profitability performance, the listing status of the target firm, method of payment, deal value

and bidder industry. We find that stock price run-up has a significantly negative coefficient, suggesting that shareholders' wealth is predicted to decrease when a bidder firm is cost to replace its assets is less than the value of its stock. We also find that M&A deals of two firms from the information technology industry are associated with low bidder returns. We partition the method of payment based on the listing status of the target firm to capture the interaction effects of target listing status and the bidder's payment method choice. The results show that acquiring a privately-owned target firm and financing the acquisition using cash resources, may not result in value creation for the shareholders. In contrast, acquiring a private target and financing the acquisition using stock issuance is associated with value creation.

8.4.3 Long-term abnormal returns

To answer Research Question 1, hypothesis H1.2 was developed stating that abnormal returns post-acquisition is negative and significant. The results indicate that abnormal returns post-acquisition, are negative and significant across variant event windows and whether portfolio returns are size-adjusted or size and market-to-book value adjusted. Thus, hypothesis H1.2 is significantly supported suggesting bidder firm shareholders lose value in the long-term, lending support to the behavioural theories. The negative abnormal returns may indicate correction in stock prices as investors are unlikely to be fully informed on the long-term merits of an acquisition at the time of its announcement and can accurately assess its future potential and impact on stock price (Fama, 1998; Jegadeesh & Titman, 2001; Oler, Harrison, & Allen, 2008). This argument is supported by the dominance of privately-owned target firms in the sample whose information only becomes public after M&A process is completed (see Table 6.3, Panel A). The results may indicate the problems acquiring firms may have integrating different organisational cultures.

8.4.4 Corporate governance and long-term bidder returns

The same hypotheses used in the short-term analysis are applied to test the impact of corporate governance on abnormal returns in the long-term. Cross-sectional regression results in the long-term support hypothesis H2.1 which states that the state is negatively related to abnormal returns in the long-term. The results demonstrate that the state as a controlling shareholder results in little monitoring of management.

The long-term results also support hypothesis H2.2. The results indicate that legal-person ownership is negatively and statistically significantly related to abnormal returns. Similar results are reported by Chi et al. (2011) who find that legal-person ownership is negatively related to abnormal returns. This may be attributed to the lack of and experience to carry out due diligence and lack of political connections. The results of this study are inconsistent with findings by Cosh et al. (2006) who find that the largest institutional shareholders have a positive effect on long-term returns for a UK sample. The difference is explained by the different nature of Chinese and UK corporate shareholders structure.

The results do not support hypothesis H2.3. The results indicate that executive ownership is negatively and significantly related to abnormal returns in the long-term. The negative coefficient indicates that bidder firms in which executives own some shareholding make M&A decisions that do not increase shareholder wealth. This may suggest that executive share ownership in a bidder firm may not act as an effective governance mechanism for mitigating tunnelling activities. This may be attributed to the fact that the magnitude of managerial ownership is still very small and the close relationship between management and the state, which the controlling shareholder in most of the listed firms, is still a cause for concern. This result is inconsistent with findings from developed countries (e.g. see, Cosh et al., 2006; Cosh, Guest, & Hughes, 2008; Sudarsanam & Huang, 2007) and China (e.g. see, D. H. Li et al., 2005).

The long-term results do not support all the three board structure variables hypotheses (i.e. H3.1, H3.2 and H3.3). Interestingly, independent directors are associated with low abnormal returns. This may suggest that simply adding independent directors to comply with the regulations may create inertia problems as they struggle to understand the various parts of the business, request more information and slowing down the decision-making process. Board size and CEO role duality reported a positive and insignificant effect on abnormal returns. The insignificance of these board structure variables is somewhat surprising because the board of directors is believed to be, or at least should be, a key tool for monitoring the actions of a firm's management. This may demonstrate that the general adoption of specific governance structures may not be appropriate for all firms and that the governance mechanisms may therefore only be beneficial in certain circumstances (Laing & Weir, 1999). For example, there may be difficulties involved in appointing enough independent directors with the expertise to monitor a large diversified company. Simply

adding the number of independent directors may, in fact, create inertia problems as they struggle to understand the various parts of the business, request information and slowing down the decision-making process.

Past performance variables report significant relationships with bidder returns. Evidence on past firm performance proxied by return on assets and stock price run-up show that they exert opposite effects on abnormal returns. There is very strong evidence that share price volatility is negatively perceived by the markets. High abnormal returns twelve months before acquisition announcement is associated with low abnormal returns. Conversely, there is convincing evidence that bidder firms that record high return on assets are associated with high abnormal returns.

8.5 Research contributions

This study advanced our understanding of the two controversial areas of M&A and corporate governance and provides insights for researchers, practitioners and regulators.

8.5.1 Contributions to the body of knowledge

This study provides insights for researchers who want to understand how corporate governance and M&A activity are intertwined in a Chinese setting. It also contributes to the growing debate on whether Chinese acquisitions produce different results with respect to popularly observed characteristics of acquisitions from developed markets by providing evidence to that effect, particularly, the involvement of the state in M&A activity as both player and regulator.

In M&A context, this study has shown that shareholder wealth effects depend upon the institutional setting and managerial behaviour. While evidence from the Anglo-Saxon economies (the US and the UK) indicates that M&A do not create value for bidding firms both in the short-term and long-term, empirical results from this study indicate that in China where the state ownership is high, M&A do create value in the short-term but lose value in the long-term. This indicates that managers in Anglo-Saxon economies are motivated by self-interest in M&A decision making while in China managers are motivated by empire building and social status enhancement.

In corporate governance context, this study's empirical results highlight the influential role that corporate governance plays in specific decisions such as M&A. This study specifically

explored how ownership and board structures related to monitoring, help to reduce total agency costs and create shareholder value. Empirical results of this study confirmed that although ownership is highly concentrated which is supposed to reduce principal-agent conflict, the fact that the controlling shareholder is the state results in little effective monitoring. Also, simply adding the number independent directors on the board to comply with regulations does not necessarily improve managerial monitoring

From a methodological perspective, this study represents one of the very few studies in finance to assess bidder returns over both short-term and long-term using the CAR and BHAR respectively. Existing literature focused mainly on calculating shareholder effects around the announcement date using the traditional CAR for short-term. However, research evidence indicates that M&A take time to become operational and make value and therefore, a longer time horizon is appropriate in assessing wealth effects. Further, given the controversies surrounding the computation of long-term bidder returns, this study uses two alternative methods. This study applies the size and, size and market-to-book value adjusted BHAR and the CTPR. This study also adopts the IV approach to mitigate endogeneity problem including 2SLS, IMML and GMM, reported the related diagnostic statistics for assessing the validity of instruments and recent advances in econometric research on weak instruments. Several prior research has acknowledged the existence of endogeneity, it does not consistently account for it using formal econometric methods. Therefore, this study offers insights on how to choose the appropriate methodology to use for computing abnormal returns in the short- and long- term, and how to mitigate endogeneity problem.

The study also examined variables that are unique to the Chinese markets which could possibly impact the bidders' market performance around and following announcements. Listed firms' ownership is dominated by either the state or legal-person. The state shares are held directly by the state or indirectly by state-controlled firms while the legal-person shares are held by corporations. Research has shown that the state and the legal-person shares influence the firm performance of Chinese listed companies differently, even though there is no consensus on the results. Thus, this study examines the influence of state and legal-person ownership on abnormal returns.

The study also highlights the importance of non-economic factors in determining abnormal returns in China's M&A activity. Deliberate government policies to save firms in financial

distress, consolidation of highly fragmented industries and protection of employment rank high among M&A drivers in China. These policies are crafted to maintain competitiveness in the global arena and maintain a high level of employment.

8.5.2 Policy implications

Our findings confirm the widely-held view that state ownership destroys shareholder value if they are primarily concerned with social objectives. This suggests that the state needs to accelerate the split-share reform and leave the market to determine the allocation of resources. Importantly, our evidence focuses the attention of the state, managers and investors on how to improve corporate governance and managerial monitoring to align managers' interests with those of the shareholders. To achieve board independence as defined by the statutory guidelines firms simply add extra members. This calls for serious re-think on how to shape the role those independent directors should play. This study, therefore, provides insights for regulators who want to ensure that M&A create value and protect against shareholder wealth destruction.

8.5.3 Practical contributions

This study indicates that domestic M&A on average do create value in the short-term and destroy value in the long-term. However, a combination of corporate governance mechanisms can have an important impact on such stock price changes. While suggestions for improved board monitoring have included dispersed ownership, inside ownership, greater use of outside directors, smaller boards, and the separation of CEO from Chairperson of the Board, this study finds no support.

The empirical results of this study also highlight that corporate governance is only one piece to the jigsaw puzzle. There are other factors that may explain changes in shareholder wealth in other words; the impact of specific governance mechanisms is contingent upon the firm-specific and deal-specific characteristics. This study, therefore, provides insights for practitioners who want to avoid making value destroying M&A decisions.

8.6 Limitations of the current study

As with any other research projects, this study is not without its limitations. First, the study was limited to Chinese bidder firms listed on the Shanghai and Shenzhen Stock Exchanges for the period 2002-2011. Second, the sample is limited to domestic M&A and because of

unavailability of data on target firms who are mainly privately owned, the study only focused on bidder firms returns. Third, the study examined only internal corporate governance mechanisms impact on abnormal returns. Although this limits the scope of the research, it was deliberately chosen as managers have direct control of internal environment but have no control over the external environment. Fourth, the study examined a sample from a particular country over a particular period and therefore, its generalizability may be limited given China's unique market environment. However, the results may be applicable to most transitional economies that have similar institutional and corporate governance settings.

8.7 Recommendations for future research

The study does not consider the human element in decision making by only concentrating on secondary data. A survey asking those involved in decision-making could have eliminated the bias that may be poised using secondary data. The survey would have offered the opportunity to determine not only the outcome of the effectiveness of the investment in corporate governance principles but also the strategic planning process and decision making in developing corporate governance principles.

Studies on the relationship between corporate governance and abnormal returns suffer from the low explanatory power of the independent variables as they are so many variables that influence decision making and this study is no exception. We, therefore, recommend further research employing different approaches and more variables to shed more light on these issues. Future research could use other stock performance measures such as operating performance. The attitude with respect to whether the deals are hostile or friendly is also a variable worth investigating.

This study shows that all cash deals are negatively related to returns while all stock deals have significant positive returns, in the short-term. Also, in long-term both cash and equity financed deals show an insignificant negative relation with abnormal returns. These findings are inconsistent with findings documented in the US and the UK empirical studies. To shed more light on this issue, we recommend an investigation that explores the influence of the method of payment on abnormal returns in detail incorporating the source of the cash. Finally, given the scarcity of literature on transitional markets, we recommend similar studies in other transitional markets for comparative purposes.

8.8 Conclusion

Mergers and acquisitions and corporate governance are two extensively researched areas in business and management realms. However, these areas have been studied separately and carried out mainly in developed and mature markets. Therefore, there is limited evidence on the link between mergers and acquisitions transactions and corporate governance mechanisms. In addition, empirical evidence based on the unique institutional settings is comparatively limited. This study integrates and examines mergers and acquisitions incidences and corporate governance mechanisms using a unique dataset from China.

The study uses a unique dataset of Chinese firms involved in merger and acquisition activities between 2001 and 2014. The short-term daily abnormal returns are calculated using cumulative abnormal returns. Given the controversies surrounding long-term returns computation, we use two alternative methods, the buy-and-hold abnormal returns and calendar time portfolio returns to calculate long-term bidder returns. We use cross-sectional regression analysis to investigate the relation between bidder returns and corporate governance.

In the short-term, this study's findings suggest that stock prices react instantaneously to 'new' information as investors perceive higher potential synergetic gains from the consolidation of fragmented firms. Analysis of the factors driving the price differences show that state and legal-person ownership are associated with low bidder returns. Adding independent directors on corporate boards does not necessarily improve management monitoring. Interestingly, combining the role of CEO and chairperson is associated with high bidder returns. In the long-term, the short-term gains are reversed based on actual performance of the resultant firm two years after acquisition. Analysis of the factors driving the price differences shows very shows that ownership structure and independent directors are associated with low bidder returns.

The study highlights the need for the state to accelerate the share structure reforms and formulate policies that promote sound corporate governance in China. It also highlights that where the state doubles up as player and regulator, M&A activity may be driven by political and social rather than economically motivated.

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Appendices

Appendix A: Selected short-term studies on bidder returns since 2000

Author(s)	Sample Period	Sample Size	Country	Event Window	CAR
Negative CAR studies					
Walker (2000)	1980-1996	556	US	-2, +2	-0.84%
Mitchell and Stafford (2000)	1961-1993	366	US	-1,+0	-0.14%
Sudarsanam and Mahate (2003)	1980-1998	519	UK	-1, +1	-1.39%
Cosh <i>et al</i> (2006)	1985-1996	363	UK	-1, +1	-2.48%
Swanstrom (2006)	1994-1998	294	US	-1, +0	-2.71%
Levi <i>et al</i> (2008)	1997-2007	442	US	-1, +1	-2.80%
Sudarsanam and Huang (2007)	1993-2004	1,849	US	-1, +1	-0.51%
Kroll <i>et al</i> (2008)	1997-2001	324	US	-5, +5	-1.90%
Bauguess and Stegemoller (2008)	1994-2005	1249	US	-1, +1	-0.20%
Wang and Xie (2009)	1990-2004	396	US	-5, +5	-2.91%
Ahn <i>et al</i> (2010)	1998-2003	1,069	US	-2, +2	-1.46%
Positive CAR studies					
Eckbo and Thorburn (2000)	1964-1983	464	Canada	-1, +0	0.81%
Fuller <i>et al</i> (2002)	1990-2000	3,135	US	-2, +2	1.77%
Campa and Hernando (2004)	1998-2000	262	EU	-30, +30	0.56%
Ben-Amar and Andre (2006)	1998-2002	327	Canada	-1, +1	1.06%
Jong <i>et al</i> (2007)	1993-2004	865	Holland	-2, +2	1.07%
Masulis <i>et al</i> (2007)	1990-2003	1,646	US	-2, +2	0.22%
Doukas and Petmezas (2007)	1980-2004	5,848	UK	-2, +2	1.00%
Kumar and Panneerselvam (2009)	1988-2006	252	India	-1, +1	1.15%
Rossi (2012)	1998-2006	120	Italy	-10, +10	2.49%
Rani <i>et al.</i> (2013)	2003-2008	155	India	-2, +2	1.96%
Ma <i>et al.</i> (2009)	2000-2005	1,477	Asia	-2, +2	1.70%
Chinese studies CAR					
Chi <i>et al</i> (2011)	1998-2003	1,148	China	-2, +2	0.27%
Huang (2010)	2000-2008	408	China	-30, +0	32.83%
Ning (2009)	1995-2005	213	China	-10, +10	2.80%
Shen (2008)	2003-2004	214	China	-20, +1	1.15%
Li <i>et al</i> (2011)	2001-2006	246	China	-3, +3	1.2%

Appendix B: Selected long-term studies on bidder returns since 2000

Author(s)	Sample period	Sample size	Country	Performance measure	Matched by	Event window	Result
Mitchell and Safford (2000)	1961-1993	2,767	US	BHAR Calendar time	Size and BTMV ratio Fama-French 3 factor	36 months	-1.0% equally- and -3.8% value-weighted -7.2% sig EW and -1.1% VW
Moeller <i>et al.</i> (2003)	1980-2001	12,023	US	BHAR Calendar time	Size and MTBV ratio Fama-French 4 factor	36 months	-16.02% sig -14.76%
Andre <i>et al.</i> (2004)	1980-2000	267	Canada	Calendar time	Fama-French regression	36 months	-0.52% sig EW and 0.30% VW sig.
Conn <i>et al.</i> (2005)	1984-1998	2,628	UK	BHAR	Size and MTBV ratio	36 months	-19.78%
Alexandridis <i>et al.</i> (2006)	1991-1998	164	UK	CAPM Calendar time	Equally- weighted Value weighted FF 3 factor	36 months	-0.62% sig EW and -0.55% sig VW -1.02% sig EW and -0.572% sig VW
Sudarsanam and Mahate (2006)	1983-1995	519	UK	BHAR	Market index Size Size and MTBV ratio	+1, +750 days	-7.94% sig -14.10% sig -14.02% sig
Bouwman <i>et al.</i> (2009)	1974-2002	2,944	US	BHAR Calendar time	Size and BTMV ratio Fama-French 4 factors	24 months	-7.22% sig 15.84% sig
Dutta and Jog (2009)	1993-2002	1,018	Canada	BHAR	Matching firm Market index	36 months	-54.0% sig 0.10% No significant abnormal returns for non- overlapping cases (N=229).

Appendix B: Selected long-term studies on bidder returns since 2000 (...continued)

Author(s)	Sample period	Sample size	Country	Performance measure	Matched by	Event window	Result
Cosh <i>et al.</i> , (2006)	1985-1996	363	UK	BHAR	Size and profitability	36 months	-16.25% sig
Doukas and Petmezas (2007)	1980-2002	3,206	UK	Calendar time	Fama-French 3 factor model	24 months	-0.88% sig
Chan and Emanuel (2011)	1999-2005	80	Australia	BHAR	Control firm	36 months	-0.04% sig
Rossi (2012)	1994-2006	120	Italy	BHAR	Market index	36 months	-24.64% sig
Boateng and Bi (2013)	1998-2008	1,267	China	BHAR	Size Size and BTMV Size, BTMV and industry	36 months	12.21% sig 13.28% sig 6.12% sig
Zhou <i>et al.</i> (2012)	1994-2008	811	China	BHAR	Size and MTBV ratio	24 months	23.36% sig
Black <i>et al.</i> (2013)	2000-2009	415	China	BHAR	Size and MTBV ratio	24 months	-7.98% sig

Appendix C: Selected studies on corporate governance and bidder returns

	1	2	3	4	5	6	7	8
Author(s)	Jong <i>et al.</i> (2007)	Masulis <i>et al.</i> (2007)	Swanstrom (2006)	Bauguess and Stegemoller (2008)	Wang and Xie (2009)	Datta <i>et al.</i> (2001)	Ahn <i>et al.</i> (2010)	Cosh <i>et al.</i> (2006)
Study Characteristics								
Country of study	Netherlands	US	US	US	US	US	US	UK
Period of study	1993-2004	1990-2003	1994-1998	1994-2005	1990-2004	1993-1998	1998-2003	1985-1996
Sample size	865	1,646	294	1,249	396	1,719	1,069	363
Event window	-2, +2	-2, +2	-1, 0	-1, +1	-5, +5	-1, 0	-2, +2	-1, +1
Estimation window	-120, -20	-210, -11	-135, -16		-210, -11	-200, -60	-210, -11	
Model	Market model	Market model	Market model	Market-adjusted returns model	Market model	Market model	Market model	Market-adjusted returns model
Bidder CAR %	+1,070	+0,215	-2.710	-0.200	-2.910	+0.02 n/s	-1.463	-1.130
Firm-specific characteristics								
Tobin's Q	+	-		-	-			
Leverage	+	+*		+	-			-
Firm size	-*	-*	-*	-*	-	-	-	+
Same administrative region								
Deal-specific characteristics								
Public	+	-		-*				
Private		-					+	
Cash			+*		+*	+*	+*	
Stock	+*			-*			+*	-
Corporate Governance								
Governance Index		-		-	+*			
Board size		-	+*	+*			+	-
CEO		-*					-	-
Independent director		+	-					-
State/block holder				+				
Legal-persons/Institutional							+*	-
Executive ownership	-			+		+	-	+

Note: * indicates significance at 10% or better

Appendix B: Selected studies on corporate governance and bidder returns (... continued)

	9	10	11	12	13	14	15
Author(s)	Reis (2008)	Levi <i>et al.</i> (2008)	Ben-Amar and Andre (2006)	Kroll <i>et al.</i> (2008)	Sudarsanam and Huang (2007)	Chi <i>et al.</i> (2011)	Pukthuanthong-Le and Visaltanachoti (2009)
Study Characteristics							
Country of study	US	US	Canada	US	US	China	China
Period of study	1994-2003	1997-2007	1998-2002	1997-2001	1993-2004	1998-2003	1998-2008
Sample size	656	442	327	324	1,849	931	86
Event window	-5, close	-1, +1	-1, +1	-3, +3	-1, +1	-2, +2	-1, +1
Estimation window	-300, -60	-200, -60	-200, -40	-300, -61	-200, -60	???	-250, -21
Model	Market Model	Market model	Market model	Market model	Market model	Market model	Market model
Bidder CAR %	-2.480	-2.800	+1.06	-1.900	-0.510	0.270	-0.19
Firm-specific characteristics							
Tobin's Q		-					
Leverage		+					+*
Firm size	-*	+			-		-*
Same administrative region						-	
Deal-specific characteristics							
Public			-*		-*		
Private							
Cash		+*	+*	+*		+*	
Stock	-*	+			-*		
Corporate Governance							
Governance Index							
Board size		+	-*	+			
CEO role duality		+					
Independent director		-*	+*	+*			
State/block holder			+*			+*	
Legal-persons/Institutional						-*	
Executive ownership			+*				

Note: * indicates significance at 10% or better

Appendix D: Creation of Reference Portfolios

A. Ten size reference portfolios

To create ten size reference portfolios, all listed firms (excluding sample firms) on 1 January of each sample year between 2002 and 2011 are ranked based on their size proxied by the market value of equity. Size deciles are then created based on these rankings with decile 1 containing the smallest firms and decile 10 containing the biggest firms. The market value of equity is calculated using the price and ordinary shares outstanding as at the end of January. Size deciles are re-formed at the beginning of each year to allow for the changing of the firms' characteristics. The return for each firm within each reference portfolio is tracked from January of year t for 12, 24 and 36 months. Following that, each bidding sample firm was matched to one of the ten portfolios that best fits its size as at January of year t .

B. Fifty size and market-to-book reference portfolios

To create fifty size and market-to-book reference portfolios, all listed firms (excluding sample firms) on 1 January of each sample year between 2002 and 2011 are ranked based on the market value. We do not exclude firms that will engage in M&A in the future because this is not known at the time of portfolio construction. Size deciles are then created based on these rankings with decile 1 containing the largest firms and decile 10 containing the smallest firms using their market value of equity. The market-to-book value of equity is calculated using the price and ordinary shares outstanding as at December. Size deciles are re-formed at the beginning of each year to allow for the changing of the firms' characteristics. Secondly, within each size decile, firms are ranked and then sorted into quintiles based on the market-to-book (MTB) ratio in December $t-1$. The MTB ratio is calculated using market capitalization and the book value of equity from the last annual accounts preceding M&A announcement. Quintile 1 contains the lowest MTB firms (glamour firm), and quintile 5 contains the highest MTB firms (value firm). This results in 50 reference portfolios. The return for each firm within each reference portfolio is tracked from January of year t for 24 and 36 months. Following that, each bidding sample firm was matched to one of the 50 portfolios that best fits its size and market-to-book ratio as at January of year t .

Appendix E: Factor construction

1. Equal-weighted factors

Market factor (Rm-Rf)

Rm is the combined return of all the listed firms on the Shanghai and Shenzhen Share Index. It is also known as the universe return. The data was obtained from CSMAR database.

Rf is the risk-free rate and is generally measured by the annualised yield on 3-month treasury bills although other measures can be used. For China, due to institutional distortions, DataStream recommends the use of the 3-month re-lending rate. This is used for our study.

The difference between universe rate and risk-free rate is the market risk premium

Size (SML) and book-to-market (HML) factors

These factors are constructed from six portfolios formed on size (market value of equity) and BTM (book-to-market ratio). The portfolios are formed annually at the beginning of year t .

- a. Our sample firms (all listed firms on Shanghai and Shenzhen Stock exchanges) are sorted by size, measured by the market value of equity in year t . Two size groups are formed using the median of the market capitalisation of all firms in year t as the size break point. The groups are denoted 'S' for small firms and 'B' for big firms.
- b. Within each size group, firms are sorted into three BTM groups based on BTM ratios in year $t-1$. These are denoted 'H' for high value, 'M' for medium value and 'L' for low value.
- c. Using the size and BTM portfolios, we form the following six (6) intersecting portfolios SH, SM, SL, BH, BM and BL, where SH is the small size, high-value portfolio, SM is the small size, medium value portfolio, SL is the small size, low value portfolio, BH is the big size, high-value portfolio, BM is the big size, medium value portfolio and BL is the big size, low-value portfolio.
- d. These portfolios are the used to form the 'small minus big' (SMB) and 'high minus low' (HML) factors as follows:

SMB is calculated as $(SH+SM+SL)/3 - (BH+BM+BL)/3$

HML is calculated as $(SH+BH)/2 - (SL+BL)/2$

Momentum (WML) factor

The momentum factor is constructed from six portfolios formed on size (market value of equity) and prior returns. Prior returns are measured as the 2-12 month prior returns. The portfolios are formed monthly.

- a. As (a) above
- b. Within each size group, firms are sorted into three groups formed on prior (2-12) returns. These are denoted 'U' for high momentum, 'M' for medium momentum and 'D' for low momentum.
- c. Using the size and prior (2-12) return portfolios, we form the following six (6) intersecting portfolios SU, SM, SD, BU, BM and BD, where SU is the small size, high momentum portfolio, SM is the small size, medium momentum portfolio, SD is the small size, low momentum portfolio, BH is the big size, high momentum portfolio, BM is the big size, medium momentum portfolio and BD is the big size, low momentum portfolio.
- d. These portfolios are the used to form the 'winner minus loser' (WML) factor as follows:

WML is then calculated as $0.5*(SU+BU)/2 - 0.5*(SD+BD)/2$

Note that all the components used to form the SMB, HML and WML factors are equally weighted.

2. Value-weighted factors

Value weighted factors are calculated by replacing the equal weighting of the factors of the SMB, HML and WML factors with a value weighting based on the market value of equity of the SH, SM, SL, BH, BM, BL, SU, BU, SD and BD factors above.