CORPORATE GOVERNANCE OF CHINESE PUBLICLY LISTED COMPANIES

WEI GU, MSc.

Thesis submitted to the University of Nottingham for the degree of Doctor of Philosophy

JULY 2013

ABSTRACT

Agency theory suggests that problems will arise when there is a separation of ownership and control in firms. According to the literature, the main agency problem under a diffused ownership structure is likely to be the conflict of interests between managers and shareholders, whereas the central agency problem under a concentrated ownership structure is probably the exploitation of minority shareholders' interests by controlling shareholders. In the case of Chinese enterprises, such problems are even more complicated, as the government acts as both the regulator and player in the markets.

This thesis utilises data from Chinese stock markets to address some important issues in the corporate governance literature. Firstly, it empirically examines the relationship between ownership structure and corporate performance in Chinese publicly listed companies (PLCs), with the heterogeneity amongst state ownership types being carefully explored. In contrast with previous research, I found that state ownership does not necessarily lead to inferior corporate performance, and some state owners can perform equally as well as their private competitors.

Secondly, this thesis thoroughly investigates the issue of corporate cash holdings of Chinese PLCs, which enhances our understanding of firms' cash holding behaviour in the context of the largest transition economy. The empirical analysis not only reveals the determinants of corporate cash holdings of PLCs, but also

confirms the existence of the target cash holding level in China. Moreover, the exploitation of firms' dynamic adjustment mechanisms towards target levels is also included in the analysis.

Finally, it seeks to redress the gap in the literature on top executive turnover in the Chinese context. The executive turnover-performance relationship is explicitly modelled in the analysis, and a variety of reasons why CEOs exit their posts are also clearly identified. Empirical findings confirm a negative relationship between corporate performance and CEO turnover. Also, empirical analysis suggests that regardless of the ownership types, there is no systematic difference in the CEO performance-turnover sensitivity among PLCs. Meanwhile, there is evidence showing that PLCs tend to report some 'face-saving' reasons instead of disclosing true reasons for turnovers, in order to protect their departing CEOs.

ACKNOWLEDGEMENT

Writing a PhD thesis is never, ever an easy task. During my enrolment in the PhD program, I have benefited a lot from support and advice from many people that I have met at The University of Nottingham. Firstly, I would like to sincerely express my gratitude to my supervisors, Dr. Kevin Amess and Prof. Sourafel Girma, for their helpful advice and comments, as well as their kindness and concern throughout my PhD program.

Secondly, I would like to thank Dr. Michelle Haynes, Dr. Effie Kesidou, Miss. Andrea Tomlinson and Dr. Allister Smeeton, all from The Nottingham University Business School. They have greatly supported me in different ways in the completion of this thesis. I also thank my colleagues, Mr. Kai Dai, Mr. Xiaoguang Zhou, Mr. Jiyao Xun, Miss. Nellie El Enany, Mr. Biao Guo, Mr. Ding Chen, Miss. Ting Qiu and Mr. Mike Tse, whose friendship I cherish.

Thirdly, I would like to acknowledge the financial support – the Business School Scholarship – that I received from The Nottingham University Business School, and also the International Research Scholarship from the International Office of The University of Nottingham.

Finally, I am grateful to my dearest parents who are always there to support me in my pursuits. This thesis is dedicated to them.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

ABC: Agricultural Bank of China

ADBC: Agricultural Development Bank of China

AGM: Annual general meeting

AMC: Asset managing company

BOC: Bank of China

CAR: Capital adequacy ratio

CBRC: China Banking Regulatory Commission

CCB: China Construction Bank

CCP: Chinese Communist Party

CCPC: Chinese Communist Party Committee

CDB: China Development Bank

CEO: Chief Executive Officer

CGGLC: Corporate Governance Guidelines for Listed Companies

CGI: Corporate governance index

CNPC: China National Petroleum Corporation

CSRC: China's Securities Regulatory Commission

E&D: Exploration and Development

EIBC: Export-Import Bank of China

FDI: Foreign direct investment

FIE: Foreign invested enterprise

GMM: Generalised Method of Moments

ICBC: Industrial and Commercial Bank of China

IIA: Independence of irrelevant alternatives

IPO: Initial public offering

LLSV: La Porta, Lopez-de-Silanes, Shleifer and Vishny

LP: Legal-person

MES: Modern Enterprises System

MRCS: Management Responsibility Contract System

NPC: National People's Congress

NPL: Non-performing loan

NPV: Net present value

PBC: People's Bank of China

PLC: Publicly listed company

PLCCG: PLC controlled by the SAMBCG or SOECGs

PLCLG: PLC controlled by SAMBLGs or SOELGs

PLCSAMB: PLC controlled by SAMBs

PLCSOE: PLC controlled by SOEs

POD: Party Organisation Department

PRAITS: Provisional Regulations on Administration of Issuing and Trading of Shares

PT: Particular Treatment

QFII: Qualified foreign institutional investors

ROA: Return on assets

ROE: Return on equity

ROS: Return on sales

SAMB: State asset management bureau

SAMBCG: State asset management bureau at the central level

SAMBLG: State asset management bureaus at the local level

SASAC: State-owned Assets Supervision and Administration Commission of the State Council

SEO: Seasoned equity offering

SETC: State Economic and Trade Commission

SEZ: Special economic zone

SHSE: Shanghai Stock Exchange

SIP: Share issue privatisation

SOE: State-owned enterprise

SOECG: SOE affiliated to the central government

SOELG: SOE affiliated to the local government

SPDC: State Planning and Development Commission

ST: Special Treatment

SZSE: Shenzhen Stock Exchange

TVE: Township and village enterprise

VAT: Value added tax

WTO: World Trade Organization

CHAPTER ONE
INTRODUCTION

1.1. Context and background

"Corporate governance deals with the ways in which owners of finance to corporations assure themselves of getting a return on their investment" (Shleifer and Vishny, 1997, p.737). When an owner (principal) does not or cannot perform management functions directly, any arrangement between the principal and his or her nominated and appointed management (agent) can contribute to the problem of interest conflicts. This is because the agent might not always make decisions in the principal's interests in some unforeseen scenarios. Theoretically, such a problem could become more severe in the presence of an informational asymmetry where owners know less about the firm's day to day operations than their delegated managers. In the presence of such informational asymmetry, managers may find it very easy to run the business in their own interests rather than those of the owners, and sometimes even at the cost of the owners. To safeguard their assets, owners need to come up with a functioning corporate governance system of control and monitoring over management. Moreover, the system should consist of a number of corporate governance mechanisms in order to ensure that managers operate the firm in the owners' interests at all times.

The definition of corporate governance may vary depending on one's view of the world. As mentioned before, Shleifer and Vishny (1997) simply define corporate governance as a way in which suppliers of finance ensure their return on the investment they have made to corporations. Gillan and Starks (1998) define corporate governance as the system of laws, rules and factors that control a firm's day-to-day operations. Denis (2001) suggests that corporate governance is comprised of the set of institutional and market mechanisms that would make self-interested managers maximise the value of residual cash flows of the firm on behalf of its shareholders.

Regardless of the various definitions above, it is clear that the fundamental issue on which the field of corporate governance is based is that there are potential problems associated with the separation of ownership and control which are inherent in the modern corporate form of organisation (Denis, 2001). The fundamental issue of corporate governance can be traced back to Smith's masterpiece in 1776 – 'The Wealth of Nations' – in which he raised concerns regarding the problems caused by the separation of ownership and control in joint-stock companies. Recent research interest in corporate governance originates from the seminal work by Berle and Means (1932), in which they describe a situation where potential conflicts of interest may occur between corporate managers and dispersed shareholders, particularly when managers do not have an ownership interest at a company. Since then, research on corporate governance has evolved over many generations. However, its ultimate aim remains unchanged, which is to improve the corporate governance system in modern corporations, to mitigate conflicts of interest, and to provide better

protection for the interests of suppliers of finance.

According to the existing literature, the main agency problem under a dispersed ownership structure is likely to be the conflict of interest between managers and shareholders, whereas the central agency problem under a concentrated ownership structure is probably the exploitation of minority shareholders' interests by controlling shareholders. Jensen and Meckling (1976), Fama (1980) and Fama and Jensen (1983a, b) primarily focused on the agency problem that arises from the conflict of interest between management and shareholders, typically in firms characterised by a diffused ownership structure. They were all concerned with the agency problems that arise when a firm's decision-making rights are in the hands of managers who are not the firm's shareholders. They doubt whether a manager who controls but does not own a firm will always operate it whole-heartedly to maximise shareholders' wealth. Rather, managers who hold substantial residual control rights may have an incentive to expropriate shareholders' interests. Arguably, their arguments about agency conflicts between managers and shareholders are based on Berle and Means's image of the ownership of modern companies. However, La Porta *et al* (1999) conducted a study using data on ownership structures of large firms in 27 wealthy economies and found that concentrated ownership is common across the world, except in countries with very good protection for shareholders. According to their findings, firms with concentrated ownership are typically controlled by large shareholders (either the state or families). A controlling shareholder is tempted to use the firm's resources to increase his/her own profits, even at the cost of minority interests. Hence, La Porta *et al* (1999) claim that the expropriation of minority interests by

controlling shareholders is 'the most pervasive agency problem' around the globe. Indeed, this study has greatly challenged the empirical validity of the long-fixed image of the modern corporation portrayed by Adolph Berle and Gardiner Means.

Further, La Porta *et al* (1997, 1998, 2000b) argue that concentrated ownership is the consequence of weak protection for investors in many economies, and relative laws and quality of their enforcement by regulators and courts are essential elements of corporate governance and finance. Their work and insights have led to the emergence of the 'Law and Finance' literature, which emphasises that countries' legal environments can have an important impact on the quality of corporate governance, and laws, regulations and the effectiveness of their enforcement are of great importance not only to the growth prospects of firms, but also the development of countries' capital markets and real economies (see, for example, La Porta *et al.*, 2000b).

The issue of corporate governance has already been well documented by the extant literature, the majority of which is based on empirical evidence from developed economies, particularly from North America and Europe. However, it has been largely underexplored in the context of emerging and transition economies. It is worth noting that emerging and transition economies differ considerably from their developed counterparts in many respects, such as level of financial market development, laws and regulations and quality of law enforcement. For example, compared with Western economies, emerging and transition economies are always criticised for their weak investor protection. Thus, there is widespread concern among academics and practitioners over whether

evidence from developed economies can be generalised and applied to emerging and transition economies.

China, as the largest developing and transition economy in the world, has experienced an unprecedented economic expansion with two-digit annual GDP growth since the beginning of the post-1978 economic reform. Considering the truly dramatic changes (both economic and social) that have happened in the past three decades, China now presents a fascinating laboratory for corporate governance research[1]. Most of the early research on corporate governance in China discusses the merits of the enterprise reform and its social impact. More recently, researchers have started using Chinese stock market data to investigate corporate governance issues. This new research allows for a more direct and quantitative evaluation of the quality of corporate governance in Chinese enterprises (see, for example, Sun and Tong, 2003; Tian and Estrin, 2007; Hou, 2011). Indeed, previous studies have truly improved our knowledge of corporate governance in the Chinese context. However, compared with the large battery of literature on corporate governance in developed economies, the empirical evidence using Chinese data is still very limited. This thesis seeks to redress the inadequacy in the literature in this respect.

[1] For example, since the inception of two stock exchanges in the early 1990s, the Chinese government has introduced a number of relevant laws, guidelines and regulations in order to build up a sound legal environment for both domestic and international investors. These laws, guidelines and regulations include the Provisional Regulations on Administration of Issuing and Trading of Shares (PRAITS, 1993), the Company Law (1994), the Securities Law (1999) and the Corporate Governance Guidelines for Listed Companies (CGGLC, 2001).

1.2. Motivations and research questions

Using relevant theoretical and empirical methodologies with data from Chinese publicly listed companies (PLCs), this thesis is comprised of three empirical chapters (Chapters 4, 5 and 6), and each focuses on corporate governance in the Chinese context from three unique respects.

The objective of the first empirical chapter (Chapter 4) is to remedy the shortcomings in previous studies by providing an in-depth analysis of the relationship between ownership structure and corporate performance in the Chinese context. The second empirical chapter (Chapter 5) aims to investigate the issue of corporate cash holdings of PLCs, and, motivated by the findings of the first empirical chapter, the heterogeneity of state entities is taken into account in the investigation. Finally, the third empirical chapter (Chapter 6) studies the top executive turnover of Chinese PLCs, with particular attention paid to the exit types of CEOs.

The first empirical chapter focuses on the relationship between ownership structure and corporate performance in Chinese PLCs. The major issue this chapter addresses is whether the identity of the largest shareholder – the ultimate controller – has an effect on PLCs' corporate performance and how such effects might vary. To do so, it builds up a new research framework for the Chinese corporate governance research by tracing and identifying the ultimate controller of various PLCs. As a result, the ultimate owners of PLCs are divided into five groups: the state asset management bureau at the central level (SAMBCG), state

asset management bureaus at the local level (SAMBLGs), SOEs affiliated to the central government (SOECGs), SOEs affiliated to the local government (SOELGs) and private investors. Particular attention has been paid to issues of relative efficiency between state and non-state shareholdings. Moreover, an analysis of relations between ownership concentration and corporate performance is also extensively conducted in this chapter, providing a complete picture for the relationship between ownership structure and corporate performance. Both *ex ante* theoretical hypotheses and *ex post* empirical evidence relative to this study are presented in detail.

The extant literature on corporate cash holdings suggests that firms could have various reasons to hold cash as long as financial markets are not perfect in the sense of Modigliani and Miller (1958). Jensen (1986) emphasises the role of corporate cash holdings in firms' corporate governance by arguing that the agency conflicts will become more severe when firms have large free cash flows. It could be argued that examining the corporate cash holdings of Chinese PLCs can enable us to have a better knowledge of the current corporate governance practices in China. Hence, the second empirical chapter aims to provide an in-depth analysis of the issue of corporate cash holdings in China. Motivated by the findings in the first empirical chapter, the heterogeneity of state entities is taken into consideration in this respect. Meanwhile, this chapter also employs the dynamic partial adjustment model to investigate whether there is a target cash holding level for PLCs. Finally, it attempts to provide empirical evidence for the dynamic adjustment behaviour of cash holdings of Chinese PLCs.

The third empirical chapter is primarily concerned with examining the issue of top executive (CEO) turnover in China. The research on this issue has recently attracted a great deal of attention from both academics and practitioners inside and outside China, as research in this area could provide a crucial measure of the effectiveness of different corporate governance mechanisms with which a firm solves agency problems. Therefore, investigating the top executive performance-turnover sensitivity is arguably an important and informative method of measuring the quality of corporate governance. The rationale behind this is that a firm with good corporate governance should always hold its top executives accountable for the firm's performance, and remove them if their performance is deemed unsatisfactory. Utilising an unbalanced panel dataset, Chapter 6 specifically focuses on the CEO performance-turnover sensitivity of Chinese PLCs. Also, it aims to identify the determinants of turnovers.

1.3. Contributions

This section presents the contributions of this thesis to the corporate governance literature. The main contribution can be largely attributed to the two prominent characteristics of the Chinese stock markets. The first characteristic is that in China the majority of firms' shares are concentrated in the sense that most PLCs have a dominant shareholder whose ownership far exceeds that of the second largest shareholders. The second characteristic is that the state is often the ultimate controller. Chen *et al* (2009) suggest that the state still retains substantial ownership in PLCs, and this ownership is scattered among various state agencies/entities, each of which may have different motivations and incentive

structures.

It is worth noting that most early research on the role of state shareholders suffers from two types of misclassification. The first type of misclassification used share type as a proxy for ultimate controller type, and the other one just lumped all types of state ownership into one group. The first empirical chapter contributes to the literature by remedying such shortcomings in the existing literature. Unlike previous studies, this chapter brings a new insight to the Chinese corporate governance literature by taking into consideration the heterogeneity of state agents. Given that state shareholders participate in the stock markets in different ways, the impact of state shareholders on firms' value is still unclear. It is important to recognise that state ownership in Chinese PLCs can have four major forms: direct control through government agencies – state asset management bureaus (SAMBs); indirect control through state-owned enterprises (SOEs); holding minority ownership through SOEs; and holding minority ownership through SAMBs. Therefore, in the case of state-controlled PLCs, there are two major types of state agents, i.e. SAMBs and SOEs. SAMBs can be further divided into sub-categories: the SAMBCG and SAMBLGs, and SOEs can also be divided into sub-categories: SOECGs and SOELGs. Therefore, PLCs can finally be classified into five major groups according to the type of the ultimate controller.

This chapter also provides empirical evidence of how the misclassification can lead to misleading conclusions. To this end, I first empirically show that PLCs controlled by private investors outperform those controlled by the state, if all state agencies are seen as one group. However, by further testing relations between

ownership structure and corporate performance in accordance with the correct classification of the ultimate controller, I clearly demonstrate that state ownership does not necessarily lead to inferior performance. In stark contrast to previous studies, my study shows that PLCs controlled by SAMBCG or SOECGs perform almost as equally well as privately controlled ones.

Finally, from the perspective of policy-making, this chapter can potentially provide a guide for the direction of future economic reform in China. Though the economic reform has been successful to date, it has come to the point where many easy and less controversial reform projects have already been carried out, and what remain are much more difficult and ideologically controversial issues. One of those issues lies in whether the state should maintain a full or controlling ownership interest in firms in several sectors (Clarke, 2003). Since in the 16th National People's Congress (NPC) in 2002 the Chinese government announced its ambition to deepen the economic reform by continuing the further divestment of state ownership in the whole economy in order to accelerate its economic growth, this issue can be put in another way: what kind of state ownership will be relinquished in the next step, and to what extent should the government retreat from the whole economy? Through thoroughly investigating the relationship between ownership structure and corporate performance, this chapter contributes to the literature by at least partially answering these questions.

The second empirical chapter examines the issue of corporate cash holdings of Chinese PLCs. This study enhances our understanding of firms' cash holding behaviour in the context of the largest transition economy. In light of the findings

of the first empirical chapter, the heterogeneity of state agents is well documented in every aspects of the analysis. The empirical analysis reveals the determinants of corporate cash holdings of PLCs, and it confirms the existence of the target cash holding level for PLCs as well as the dynamic adjustment mechanisms towards the target level. Meanwhile, empirical results suggest that the two competing theories of corporate cash holdings, i.e. the trade-off theory and financing hierarchy theory/pecking order theory, are both found to help explain the cash holding behaviour in China. Furthermore, the empirical analysis supports that agency problems are at least part of the reason for PLCs in China to hold cash.

The main contribution that the second empirical chapter attempts to make is two-fold. Firstly, this chapter explicitly investigates the determinants of PLCs' corporate cash holdings, with special regard being paid to the ultimate controllers of PLCs as well as the unique characteristics of the Chinese stock markets. Utilising an unbalanced panel dataset and employing System Generalised Method of Moments (System GMM), the empirical analysis indicates that PLCs controlled by private owners hold significantly more cash holdings than state owners both in the short-run and in the long-run, while there is no statistically significant difference among state owners in this aspect. Given the unique characteristics of the Chinese stock markets, two possible explanations are provided: relatively easier access to external funds of state owners due to the 'soft-budget' constraint, and private owners' incentive to expropriate minority interests due to China's weak legal system.

The second contribution of this chapter lies in the exploitation of the dynamic adjustment behaviour of the corporate cash holdings of Chinese PLCs. The findings of this chapter are consistent with the view that due to the existence of adjustment costs, Chinese PLCs cannot instantaneously adjust towards the target cash holding level. It is also interesting to note that PLCs with private controllers have the fastest adjustment speed. Two likely reasons are given to help explain these findings: firstly, compared with their state-controlled rivals, PLCs with private owners may be more financially constrained, and secondly, they are simply more operationally efficient.

There is a perception in the corporate governance literature that firms with good corporate governance practices should be effective at disciplining under-performing top executives, and ousting them if necessary in extreme cases. Prior research has suggested that it is necessary to distinguish between forced and normal turnovers (see, for example, Parrino, 1997; Farrell and Whidbee, 2003). Based on the rationale that only forced turnovers can reflect the disciplinary efforts of shareholders, Chang and Wong (2009) suggest that distinguishing between forced and normal turnovers can enable researchers to more effectively assess the quality of firms' corporate governance. However, there are flaws in the prior research in this respect. A turnover with certain reasons can either be forced or normal, which largely depend on the destination of the leaving CEO. This chapter is intended to contribute to the extant literature by remedying such flaws.

The third and final empirical chapter seeks to address these two issues in two ways, so as to provide a richer analysis and understanding of executive turnover

in China. First, the executive turnover-performance relationship is explicitly modelled. Moreover, heterogeneity amongst state ownership types is exploited in order to examine whether the relationship is different for different types of state ownership. Second, the data identifies a variety of reasons why CEOs exit their posts (e.g. 'Dismissal', 'Personal reasons', 'Resignation' and 'Retirement'). Some reasons might be regarded as 'face-saving' types of exit. Utilising an unbalanced panel dataset and employing multinomial logistic regression techniques, the empirical analysis reveals several interesting findings regarding the CEO turnover of Chinese PLCs. First, just as expected, a negative relationship between corporate performance and CEO turnover is found, which clearly indicates that an improvement in firm performance will decrease the probability of a CEO being removed.

Second, state-controlled PLCs may have adopted similar performance-evaluation standards for their CEOs as their private rivals, as no systematic difference in the CEO performance-turnover sensitivity is found among PLCs. Compared with PLCs with private owners, the state-controlled ones are more likely to retain their incumbent CEOs only if turnovers are not performance-related. Since the top executive performance-turnover sensitivity is an important indicator of the quality of corporate governance, this finding can be considered as evidence for the great improvement of corporate governance by the state ownership of Chinese PLCs.

Third, by splitting the sample according to the stated reasons for CEO turnovers, results suggest that PLCs may use some 'face-saving' reasons when their incumbent CEOs are dismissed. Last but not least, regardless of China's

rudimentary capital markets and weak legal environment, my findings show that the majority of governance mechanisms are found to have the same effects as in developed economies.

1.4. Organisation of the thesis

The remainder of the thesis is organised as follows. Chapter 2 presents a review of the corporate governance literature in general. A description of the Chinese economic reform, the development of Chinese corporate governance and the issue of regional differences in China is included in Chapter 3. Chapters 4, 5, and 6 empirically investigate corporate governance of Chinese PLCs from three important angles, which are the relationship between ownership structure and corporate performance, the issues of corporate cash holdings and top executive turnover, respectively. Chapter 7 concludes and summarises.

CHAPTER TWO
CORPORATE GOVERNANCE AND SEPARATION OF OWNERSHIP AND CONTROL

2.1. Introduction

The concept of corporate governance stretches back to Smith's milestone work, 'The Wealth of Nations' in 1776, which raised a concern regarding the problems caused by the separation of ownership and control in joint-stock companies. Since then, corporate governance research has been evolving for generations (Berle and Means, 1932; Jensen and Meckling, 1976; La Porta *et al.*, 1998). However, its ultimate aim remains unchanged, and concerns the setting up of an appropriate corporate governance system to best match ownership with control, and to mitigate any conflicts between the two. This will lead to order and corporate efficiency. Denis and McConnell (2002) suggest that corporate governance is a set of institutional and market-based mechanisms that would make self-interested insiders of a company make decisions that maximise the value of the company to the suppliers of capital. Or, stated simply, corporate governance research investigates how suppliers of finance ensure a return on their investment (Shleifer and Vishny, 1997). Over the past half century, there has been an extensive array of literature that has focused on these issues (see, for example, Jensen and

Meckling, 1976; Grossman and Hart, 1980; Fama, 1980; Fama and Jensen, 1983a, b; Shleifer and Vishny, 1986; La Porta *et al.*, 1997, 1998, 1999, 2000a, b).

Modern corporations are always subject to various conflicts of interest due to the fact that not all fund providers of a firm (owners, including investors and creditors) can or want to participate in corporate daily operations, and these owners cannot take for granted that their authorised management will always run the firm in their interests without effective monitoring. In this sense, when ownership and control in a modern company do not fully coincide with each other, potential conflicts of interest between owners and controllers may arise. Such conflicts can ultimately reduce the value of a company. Early research on corporate governance was primarily focused on conflicts of interest between shareholders and management. Jensen and Meckling (1976) introduce the 'classic' agency theory, which is mainly aimed at resolving agency conflicts between shareholders and their appointed managers. Jensen and Meckling's 'classic' agency theory has spawned a large body of corporate governance research as well as strongly influencing the direction of the research for the following two decades. In the late 20th century, the corporate governance literature was largely focused on corporations in one economy. Through the 1970s and 1980s most empirical research was based on the US-based corporations, and in the early 1990s the literature began to extend to other major world economies, such as the UK, Germany and Japan. It was not until the mid-1990s that a large body of international corporate governance literature started to appear.

More recently, another set of agency conflicts – conflicts of interest between large shareholders and minority shareholders – has arisen and has successfully attracted much attention from both academics and practitioners. Starting in the mid-1990s, studies on corporate governance began to expand to include countries other than the US, the UK, Japan and Germany. They provide a clearer image of ownership concentration around the world, and reveal that around the world concentrated ownership structures are more typical than diffused ownership structures. La Porta *et al* (1998) examine legal rules, the origin of these rules and the quality of their enforcement in 49 countries. They suggest that the concentration of ownership of shares in large publicly companies is negatively related to legal protections for investors. That is, high ownership concentration might be an adaptive response to poor investor protection in some economies, and it may also be a symptom of poorly functioning financial markets. La Porta *et al* (1999) conduct a study using data on ownership structures of large firms in 27 wealthy economies and found that concentrated ownership is common across the world, except in countries with good investor protection. Based upon their findings, they suggest that instead of the agency conflicts between shareholders and management, the most pervasive agency conflict stems from the expropriation of minority interests by large shareholders. Indeed, studies by La Porta *et al* (1997, 1998, 1999, 2000a, b) have injected new impetus into corporate governance research and pointed out a new direction for future research. Moreover, their studies have led to the emergence of the La Porta, Lopez-de-Silanes, Shleifer and Vishny (LLSV) 'Law and Finance' literature. The 'Law and Finance' literature suggests that a country's legal system is a fundamentally important external corporate governance mechanism. Also, this growing body of research points out

that corporate governance can directly affect not only the value and growth prospects of individual firms, but also the development of countries' financial markets and real economies.

The remainder of this chapter is organised as follows: Section 2.2 discusses the 'classic' theory of agency conflicts introduced by Jensen and Meckling (1976), and possible solutions to these conflicts. The 'new' theory of agency theory proposed by La Porta *et al* (1998) is thoroughly described in Section 2.3. Section 2.4 concludes this chapter.

2.2. Agency problems between management and shareholders

This section briefly discusses the 'classic' theory of agency conflicts introduced by Jensen and Meckling (1976), reviews the empirical evidence and gives an overview of the main internal and external mechanisms to reduce agency conflicts between management and shareholders.

2.2.1. 'Classic' agency conflicts

The 'classic' agency problem, in its simplest form, illustrates a relationship between two parties – principals (owners) and an agent (manager) who makes decisions on behalf of the principals. As the ownership of a modern corporation becomes dispersed, as depicted in Berle and Means's (1932) work, the owners might have few interests and incentives to get involved in the firm's day-to-day operation, and hence have to render their capital and control rights to professional managers with the hope that their authorised management may be able to run the

firm more efficiently to generate higher returns than if the firm was managed by themselves. In an ideal world, owners and the manager would sign a complete contract in which they specify exactly what the manager needs to do with the funds, and how the profits are allocated. However, it is difficult to foresee all future contingencies, and such a complete contract is not technologically realistic. Owners, therefore, have to allocate at least part of their residual control rights to the management in firms' daily operations. It is worth noting that if left to their own devices, managers may act in their own interests, which might not always be in line with those of the owners. It is difficult for shareholders to be assured that their funds are used efficiently and not wasted on, for example, negative net present value (NPV) projects. The shareholders, correspondingly, can discourage managers from diverging from shareholders' interests by devising appropriate incentives for managers and then monitoring their behaviours and extra costs; agency costs might be generated consequently in order to implement this.

These extra agency costs mainly result from three types of expenses, defined by Jensen and Meckling (1976) as monitoring costs, bonding costs and residual loss. It is believed that the agent may not always act in the best interests of the principal, if they both seek to maximize their own individual utility. Jensen and Meckling (1976) suggest that "the principal can limit divergences from his interest by establishing appropriate incentives for the agent and by incurring monitoring costs designed to limit the aberrant activities of the agent. In addition in some situations it will pay the agent to expend resources (bonding costs) to guarantee that he will not take certain actions which would harm the principal or to ensure that the principal will be compensated if he does take such actions"

(p.308). Moreover, they argue that in addition to positive monitoring and bonding costs incurred in most agency relationships, there will be some reduction in the principal's welfare caused by the divergence between the decisions of the agent and those of the principal. The reduction in welfare experienced by the principal is referred to as the 'residual loss'.

The literature provides clear evidence that agency conflicts between management and shareholders frequently occur and can result in a substantial reduction of corporate value. Some of the clearest evidence on agency problems comes from firms' corporate payout policy. Jensen (1986) suggests that managers in the US oil industry chose to spend large free cash flows heavily on Exploration and Development (E&D) activity and diversification programs outside the industry, rather than returning excess resources back to shareholders. He suggested that conflicts of interest between management and shareholders over the payout policy are extremely severe in firms with substantial free cash flow. Managers have strong incentives to make their firms go beyond the optimal size, rather than returning profits to shareholders in the form of dividends. Moreover, managers also have great incentives to retain a large portion of excess cash, since payouts to shareholders reduce the resources under managers' control, thereby reducing managers' power, and financing projects externally are likely to attract the monitoring of the capital markets. Therefore, Jensen (1986) claims that there would be intensified agency problems for firms with poor investment opportunities and excess cash. Consistent with this view, Shleifer and Vishny (1997) suggest that since managers' remuneration is highly related to firm size, managers are likely to use firms' excess cash to pursue a diversification strategy

and expand firms beyond the rational level through acquiring other firms. There has been a large body of empirical literature in support of the argument that such agency conflicts could severely reduce shareholders' value (see, for example, Morck *et al.*, 1990; Lang and Stulz, 1994; Comment and Jarrell, 1995). More evidence that clearly demonstrates the agency conflicts between management and shareholders has been provided by the research on the job security of management. Jensen and Meckling (1976) argue that the best interests of shareholders do not necessarily coincide with the best interests of managers.

Walking and Long (1984) provide supportive evidence for Jensen and Meckling's argument. Their research provides direct empirical evidence on the relationship among agency theory, managerial welfare and takeover bid resistance. The agency theory suggests that the best interest of managers may differ from the best interest of shareholders, while the takeover process itself has been seen as a corporate governance mechanism to deal with management-shareholder agency conflicts. Target managers in certain situations (such as merger and tender offer situations) may however place their own welfare over the fiduciary duty to shareholders. That is, target managers will make decisions on a tender offer in accordance with their own bid-induced welfare changes. This is called the managerial welfare hypothesis. By conducting tests on a sample of 105 cash tender offers during the 1972-1977 period, Walking and Long (1984) provide direct empirical support for the managerial welfare hypothesis. They find that whether managers of the target firms resist takeovers or not is directly conditioned on their personal welfare changes. Moreover, a target firm's managers are less likely to resist takeovers if they are more likely to obtain large

individual gains after a successful takeover.

Jarrell and Poulsen (1987) examine the effects of anti-takeover amendments on shareholders' wealth between 1979 and 1985. Based on their findings, they argue that shareholders' wealth tends to be harmed when managers propose anti-takeover amendments. Consistent evidence is provided by Ryngaert (1988) and Malatesta and Walking (1988), whose work focuses on the wealth effects of poison pill defenses. A poison pill is a takeover defense initiated by a company's board of directors, and it can dramatically drive up the potential cost that a hostile acquirer needs to pay to acquire the company. Typically, the poison pill entitles its holders to buy the shares of a company at a discounted price if a takeover attempt occurs without approval from the board. The most popular type of poison pill usually has a 'flip-over' feature that allows current shareholders of a targeted company to have the option to purchase discounted shares after the potential takeover is successful. Davis (1991) argues that the direct effect of the poison pill is to 'poison' the target firm with obligations implied by the pill, thus making the potential takeover prohibitively costly. Devised and widely adopted by boards of directors in the 1980s, the poison pill is a way for directors to prevent hostile buyers from directly negotiating with companies' owners and to instead encourage negotiation with the board.

2.2.2. Solutions to the 'classic' agency problem

Researchers and practitioners have already proposed and empirically examined several internal and external mechanisms to reduce the agency conflict between shareholders and managers. Each of these has received substantial attention in the

literature in its own right. In this section I will briefly discuss five mechanisms: executive compensation contracts, issuance of debt, board of directors, monitoring presence of large shareholders and market for corporate control.

2.2.2.1. Executive incentive contracts

Incentive contracts are designed to align managers' and shareholders' interests, since the 'classic' agency problems stem from the conflict of interests between them. Incentive contracts usually come in four forms: salary, performance-based bonuses, stock option and management ownership, and they are all aimed at better aligning the interests of managers and shareholders. The incentive contracts could bring in a financial incentive for management to run firms more efficiently and increase corporate value, and such incentives should ultimately lead to better corporate performance (Jensen and Meckling, 1976). Jensen and Murphy (1990) empirically examine whether incentive contracts can provide managers with value-increasing incentives, and argue that the effectiveness of incentive contracting can be judged by the sensitivity of the pay-performance relation. They find that the sensitivity of such a relation in US corporations is weak and interpreted their findings as evidence of inefficient compensation arrangements in the US. Moreover, their evidence seems to suggest that although performance-based compensation contracts may be an effective way to reduce or eliminate the agency conflicts between management and shareholders, the actual effectiveness of performance-based compensation should always be questioned.

In a publicly owned company the CEO and other top executives are often paid salary plus performance-based bonuses. The salary of top executives is a given

amount of cash income and can be revised after a period based on their performance. The performance-based bonuses are usually formula-driven and have some performance criteria attached. The performance-based bonuses are often adopted by companies as short-term incentives. In addition to the salary and the performance-based bonuses, top executives are also compensated with some long-term incentives. The long-term incentives (more than one year) are often referred to as management ownership and stock options. Management ownership is a certain amount of shares granted to top executives as part of the compensation package. Generally, the management ownership can serve as a bond by which top executives are induced to operate firms in the best interests of shareholders. The stock options give top executives the legal right to buy a certain number of shares at a fixed price in the future assuming that conditions of continued employment and other requirements are satisfied, and such a fixed price is usually below the market price. For those executives whose incentive packages include management ownership and stock options, it is likely that they would be more incentivized to run firms more efficiently in order to increase firms' market values. Among the four main forms of incentive contracts (salary, performance-based bonuses, stock options and management ownership), stock options are a particularly popular form. Despite the benefits created by the stock option schemes, there are potential downsides associated with this form of incentive contract. Shleifer and Vishny (1997, p.745) argue that, "the more serious problem with high powered incentive contracts is that they create enormous opportunities for self-dealing for the managers, especially if these contracts are negotiated with poorly motivated boards of directors rather than with large investors." For example, Yermack (1997) analyses the dates of stock

option awards to CEOs of Fortune 500 companies between 1992 and 1994 and finds that the timing of awards coincides with favourable movements in companies' stock prices. CEOs are often found to receive stock option awards shortly in advance of good news announcements. Rather than interpreting such findings as a cause-and-effect relationship between long-term incentive compensation for managers and superior managerial decisions, Yermack provides an opposite view that managers who are aware of future improvements in corporate performance are likely to increase their individual benefits by capitalising on expected outside investors' reactions to such corporate news. Arguably, stock option awards, under this interpretation, appear more like low-risk devices for increasing managers' own benefits than a managerial incentive mechanism.

The extant literature also suggests that managerial ownership as a form of incentive contract is indeed common in practice, and it is supposed to serve as a mechanism to better align managers' and shareholders' interests. However, the true effects of managerial ownership on firms' values are inconclusive. That is, the managerial ownership could be a 'double-edged' sword. On the one hand, it may have the 'alignment' effect – managerial ownership can help align interests of managers with those of shareholders, thus managers are better incentivised to maximise shareholders' wealth. On the other hand, it may also have the 'entrenchment' effect – higher managerial ownership may provide managers with a shelter against monitoring, making it much easier for managers to pursue their private benefits, often at the costs of shareholders. In line with the above reasoning, the ultimate effects of the managerial ownership on a firm may be

conditioned on the trade-off between the 'alignment' and 'entrenchment' effects. Such mixed effects of managerial ownership on corporate value have been clearly reflected in the existing empirical research. For example, Morck *et al* (1988) investigate the relationship between management ownership and firms' market valuation measured by the Tobin's Q of 371 Fortune 500 firms in 1980. They find a significant non-monotonic relationship – Tobin's Q first rises, then declines and finally slowly increases as the board ownership increases. Based on their findings, they suggest that the increases of the Tobin's Q reflect the 'alignment' effect of managerial ownership, which seems to be the result of the convergence of interests between managers and shareholders, while the firms' value starts to decrease as the 'entrenchment' effect starts to dominate the 'alignment' effect over some ranges of managerial ownership. Similar evidence is found by McConnell and Servaes (1990).

2.2.2.2. Creditors

The use of debt financing provides extra outside monitoring from creditors, and the threat of bankruptcy can force management to run firms more efficiently. Shleifer and Vishny (1997) point out that large creditors, such as banks, are potential active investors, and, like large shareholders, they have considerable stakes in firms and want to assure themselves of positive returns on their investments. In order to guarantee that their enormous investments in firms generate positive returns, large creditors have both the substantial power and expertise to get actively involved in firms' major decision-making processes. It is worth noting that at least part of large creditors' power comes from a variety of control rights to which they are entitled when firms default or violate debt

covenants (Smith and Warner, 1979). Furthermore, Jensen (1986) argues that debt can reduce the agency costs of free cash flows by reducing the cash flows available for spending at the discretion of managers, thus effectively preventing managers from wasting the firm's resources in uneconomical projects. This is because debt holders may impose great pressure on management, thus giving managers greater incentives to run firms much more efficiently and to strive to meet the requirements set out in the debt covenants. Notwithstanding, Jensen (1986) acknowledges that the positive effect that debt issuance could have on the management may not be as important for rapidly growing corporations with large and highly profitable projects but no free cash flow.

However, it is worth noting that while monitored debt can help reduce some agency costs, it can also bring other costs to a firm. Fama (1985) argues that incurred monitoring and regulatory costs of bank loans can be passed on to borrowers via financing terms. Myers (1977) suggests that strict debt covenants may limit a firm's refinancing ability to a large extent, and may even cause companies to forego profitable investment projects because debt holders bear part of the cost. Consistent with Myers's view, Jensen (1986) suggests that the optimal debt level is the point where the marginal costs of debt just offset the marginal benefits and hence the corporate value is maximised. In this sense, increased leverage may also incur costs, for example the costs of interest and the bankruptcy costs. Therefore, debt issuance should be viewed as a 'double-edged' sword that involves a trade-off between costs and benefits to a firm.

2.2.2.3. Board of directors

In theory, the board of directors is elected by all shareholders at a firm's annual general meeting (AGM) and is supposed to look after the interests of all shareholders. Directors should closely monitor managers and take effective actions (for example, oust incumbent management if necessary) to safeguard shareholders' wealth. The extant literature on the board of directors is intensively focused on the relation between board characteristics, firm performance and the quality of firms' decisions, whereas the role that the board of directors can play in effectively reducing agency conflicts still remains as an empirical question.

Board characteristics mainly concern two aspects: board composition and board size. Fama and Jensen (1983a) argue that effective boards should separate the functions of decision management and decision control. They suggest that effective boards would be composed largely of outside directors (independent directors). Arguably, a more independent board would lead to lower agency costs and better corporate performance. However, empirical studies provide weak support for such a positive relation between board composition and corporate performance. Hermalin and Weisbach (2003) summarise the US evidence and claim that higher proportions of outside directors are not necessarily associated with better corporate performance. As to the relationship between board size and firm performance, Hermalin and Weisbach (2003) suggest that board size is negatively related to both corporate performance and the quality of decision making. Jensen (1993) finds that when a board becomes oversized, agency costs increase and the board becomes more symbolic rather than being an effective

internal governance mechanism. He therefore makes the claim that small boards are likely to be more effective than large boards.

Arguably, the major role of the board is to design efficient corporate monitoring and ratification mechanisms. There are mounting empirical studies that have been conducted in order to investigate whether and how the board of directors affects the quality of firms' operational decisions, such as decisions regarding CEO turnover, responses to hostile takeovers and adoption of anti-takeover amendments. A number of studies have examined how directors sitting on boards fulfill these responsibilities that are commonly assigned to them. Weisbach (1988) investigates the relation between the monitoring by inside and outside directors and CEO turnover. He finds a stronger link between CEO turnover and firm performance in firms whose boards are more likely to be dominated by outside directors. His results may imply that outsider-dominated boards can hold their management more accountable for firm performance than insider-dominated boards, and directors can increase firms' corporate value by removing under-performing managers. Dahya *et al* (2002) also provide consistent evidence that outsider directors are more likely to fire incumbent CEOs. Their evidence may indicate that outside directors on the board can play a more effective role in monitoring the management than inside board members. Moreover, the positive and active role that outsider directors play in enhancing firms' corporate governance systems has also been demonstrated in the literature on the market for corporate control. For example, Cotter *et al* (1997) investigate 169 tender offers during the period 1989 to 1992 in order to examine the role of target firms' outsider directors in the takeover attempts. They report that when a target's board

contains a majority of outside directors, the shareholders of the target firm receive gains that are about 20 percentage points higher than a similar firm without a majority of outside directors on their board. Moreover, they also find that the target shareholder returns are greater in resisted offers when the board is outside-dominated.

Overall, the literature suggests that board composition might not be closely related to firm performance, while board size and corporate valuation are often found to be negatively correlated (see, for example, Hermalin and Weisbach, 2003). It can also be concluded that board composition in reality seems to have some effects on the quality of firms' operational decisions (See Kaplan and Minton, 1994 and Renneboog, 2000 for further examples).

2.2.2.4. Large shareholders

There has been a large body of literature indicating that large shareholders (blockholders) can play a positive role in corporate governance by monitoring and disciplining the management. Shleifer and Vishny (1986) argue that the existence of large blockholders can be a partial solution to free-rider problems, hence reducing agency costs. The rationale behind this is that when a shareholder builds up a significant block of equity in a firm and becomes a large blockholder, he is supposed to have both the ability and the incentive to monitor and influence the management so as to ensure positive returns on their large investments in the firm.

Concentrated ownership structures have been found to be a common phenomenon around the world (La Porta *et al.*, 1999). Even in countries where diffused ownership structures are believed to be the norm, such as the US, a number of cases of majority shareholders can still be found in public corporations (see, for example, Holderness and Sheehan, 1988a, b). When taking a look outside the US, concentrated equity ownership structures are more often observed (see, for example, Shleifer and Vishny, 1997; Claessens *et al.*, 2002). La Porta *et al* (2000b) suggest that there are large differences among countries in ownership concentration in publicly traded firms and these differences should be closely related to the quality of legal protection of investors, including both shareholders and creditors.

The presence of large shareholders can act as a shelter to protect shareholders from expropriation by managers, but it does not come without costs. Empirical evidence on the role of large shareholders in exercising corporate governance is substantial and mixed. On one hand, there is some evidence clearly suggesting the positive effects of large shareholders on corporate performance. Barclay and Holderness (1991) document numerous cases of trades of large-percentage blocks of shares being associated with abnormal stock price increases afterward. Becker *et al* (2008) develop and test an empirical framework that allows them to analyse the effects of large non-managerial shareholders on corporate policies and performance in the large US public companies. Consistent with the view that large shareholders can play a positive role in corporate governance, they find that the presence of these non-managerial large shareholders enhance firm profitability, increase dividend payout, decrease corporate cash holdings and reduce executive

compensation. Frank and Mayer (2001) find that large shareholders are associated with higher turnover of directors in German firms, suggesting large shareholders' monitoring efforts. With respect to Japanese firms, Kang and Shivdasani (1995) show that the unconditional likelihood of non-routine top executive turnover is higher in firms with concentrated ownership, and the likelihood of outside succession relative to an internal appointment is found to be closely related to large shareholders.

On the other hand, despite mounting evidence demonstrating a positive role that blockholders may play in corporate governance, there are potential costs of the concentrated shareholdings that are worth noting. One major cost of concentrated ownership arises from low stock liquidity and potential loss of risk-sharing benefits. On one hand, Bolton and Thadden (1998) suggest that "when a firm decides to set up a controlling block, it reduces the number of shareholders who can participate in the trading of the firm's stock and, therefore, it effectively reduces the market capitalisation, and hence the liquidity of its stock" (p.3). In the spirit of Bolton and Thadden (1998), a concentrated ownership structure would limit market participation by potential shareholders and thus lower a firm's market liquidity. On the other hand, it is worth noting that one function of firms going public is related to the potential risk-sharing gains. However, Admati *et al* (1994) argue that although some degree of ownership concentration might encourage monitoring activities by large shareholders, it could lead to a potential loss in risk-diversification gains that could be achieved with a diffused ownership structure. Another significant cost of block shareholdings appears to be associated with the fact that large shareholders have both the power and the interest to

expropriate minority interests using their uncontained controlling power (La Porta *et al.*, 1999). The latter type of cost gives rise to the LLSV 'Law and Finance' literature and will be more extensively discussed in Section 2.3.

2.2.2.5. Market for corporate control

The market for corporate control is always referred to as the takeover market. The vast literature indicates that takeovers are an important mechanism in corporate governance. Takeovers usually go through merger, tender offer or proxy contest, and sometimes elements of all three are involved (Jensen and Ruback, 1983). The rationale behind takeover markets as a corporate governance mechanism is that poorly performing firms would be punished by the market as they are more likely to be targets of takeover attempts and the managers of poorly performing firms are more likely to be fired (Denis and McConnell, 2003). In relation to its function of disciplining the managers of firms in this sense, Jensen and Ruback (1983) suggest that the takeover market could be seen as an important component of the managerial labour market. Based on a study of UK hostile bids in 1985 and 1986, Franks and Mayer (1996) report that takeovers are followed by high turnover of directors sitting on boards.

Despite the positive role of takeovers, it can be argued that they can sometimes cause extra agency costs to acquiring firms when bidding managements overpay for acquisitions in order to further their own benefits (Shleifer and Vishny, 1988). Furthermore, it is worth noting that takeovers are not always in place to be adopted as a corporate governance mechanism as they could be subject to political opposition in many countries. Denis and McConnell (2003) review a

number of empirical studies on takeover activities around the world and find that takeover attempts have been rare outside the US and the UK. In some countries, there has been no activity or very thin takeover markets. Therefore, they assert that takeover market does not appear to be an important mechanism in corporate governance around the world.

2.3. Agency conflict between controlling and minority shareholders

2.3.1. 'New' agency conflicts

I use 'new' agency conflicts here to distinguish the agency conflicts arising out of the interest conflicts between controlling and minority shareholders from Jensen and Meckling's (1976) 'classic' agency conflicts. The phrase 'new' agency conflicts does not mean they are really new, but rather that they represent a subtle but substantial shift of research interests from 'classic' agency conflicts towards agency conflicts between controlling and minority shareholders. The 'new' agency conflicts are considered to be the most pervasive agency conflicts (La Porta *et al.*, 1999) and have been extensively examined in the large and growing body of the LLSV 'Law and Finance' literature.

Most research in the corporate governance area in the late 20th century was focused on the US and the UK markets, where investor protection is relatively strong and dispersed corporate ownership structures are seen as the norm. However, La Porta *et al* (1999) investigate the ownership structure of large corporations in 27 wealthy economies and find that except in countries with very

good investor protection, such as the US, most large firms are narrowly held, and many of them have controlling shareholders. Typically, through pyramid structures and participation in the management, these controlling shareholders make their control rights over firms well in excess of their cash flow rights. Moreover, they find that these large firms, as a consequence, have a problem of separation of ownership and control. Unlike the image of modern corporations described by Berle and Means (1932) that firms are run by professional managers without equity ownership, La Porta *et al* (1999) find that these large firms are usually managed by controlling shareholders themselves who have both the ability and interest to expropriate minority shareholders. Therefore, they claim that the divergence between control and cash flow rights can potentially lead to agency conflicts between controlling and minority shareholders. Recent research has clearly demonstrated that concentrated ownership is common around the world, particularly in countries with relatively poor shareholder protection. For example, Faccio and Lang (2002) report that in their sample of 5,232 corporations in 13 Western European countries, 44.29% of firms are family controlled. Claessens *et al* (2000) report that in their sample of 2980 corporations in nine East Asian countries, the majority of these corporations have controlling shareholders and their managers are usually found to be relatives of the controlling shareholder's family.

La Porta *et al* (1998) investigate the legal rules that provide protection to both shareholders and creditors, the origin of these rules, and the quality of their enforcement in 49 countries. Their findings show that countries whose laws originate from common law tradition generally have the strongest legal protection

for investors, while countries whose legal rules originate from French civil law tradition have the weakest. German and Scandinavian civil law countries are in the middle group in terms of legal protections. In addition, they find that German and Scandinavian civil law countries have the best quality of legal enforcement. Legal enforcement is also strong in the common law countries, whereas it is the weakest in the French civil law countries. Finally, they report that ownership concentration is surprisingly high around the world, and then argue that the high ownership concentration might be an adaptive response to the weak legal protection for investors as narrowly held ownership can shield large shareholders from expropriation by the management, whereas this benefit comes at a cost to minority shareholders, i.e. conflicts of interest between principals. Johnson *et al* (2000) use the word 'tunneling' to describe the expropriation by controlling shareholders, which they found to be a worldwide phenomenon. 'Tunneling' means the transfer of assets and profits out of firms for the benefit of controlling shareholders (through underground tunnels).

La Porta *et al* (1998), together with their other works (for example, La Porta *et al* (1997, 1999, 2000a, b, 2002b), have significantly changed the direction for corporate governance research and started the LLSV 'Law and Finance' literature. The 'Law and Finance' literature emphasises the essential role of laws, as well as the quality of their enforcement in corporate governance in most countries. A major theme of this literature is that a country's legal environment, as an important corporate governance element, can have a direct impact on both the corporate governance at the firm level, and on the country's capital market and real economy. Weak investor protection can not only potentially decrease the

value of firms, but also hinder the development of capital markets and growth of real economies.

Existing empirical studies have presented plenty of evidence of the 'new' agency conflicts between controlling and minority shareholders from both developed and developing economies. Based upon a survey of East Asian firms, Claessens *et al* (2002) find that Tobin's Q decreases with the separation of cash flow rights from the control rights of the largest shareholder. They interpret their findings as evidence that controlling shareholders may have a greater incentive to expropriate minority shareholders as the wedge between their control rights and cash flow rights increases. Bertrand *et al* (2000), using a large sample of 18,600 Indian firms during the period from 1989 to 1999, find that resource diversion in Indian business groups follows the lines of ownership, flowing from the bottom to the top of the pyramid. Unlike Indian business groups which are often held via the pyramid structure, cross-shareholdings are a more common mechanism of controlling firms in Korean business groups (chaebols). Bae *et al* (2002) provide evidence that controlling shareholders of Korean chaebols can probably gain from acquisitions, while their minority shareholders are likely to lose out on these acquisitions. Their findings can lend supportive evidence to the tunneling hypothesis of controlling shareholders. More direct evidence is provided by research on related lending. For example, La Porta *et al* (2003) examine the benefits of related lending using a dataset for Mexico. They found that related lending is prevalent in Mexico, which means that banks are more likely to lend to firms controlled by the banks' owners. Although related loans have similar terms

to unrelated loans, they are 33 percent more likely to default, and have 30 percent lower recovery rates if they default than unrelated ones.

The empirical evidence on the 'new' agency conflicts shows that for many countries, expropriation of minority interests by controlling shareholders is an important and costly problem, especially in countries with poor investor protection. This may suggest that the investor protection in many countries is far from optimal, and it might be imperative to address problems arising out of the 'new' agency conflicts as they probably have negative effects on individual firms, capital markets and real economies.

2.3.2. Solutions to the 'new' agency conflicts

To reduce the 'new' agency costs, researchers have been active in participating in discussions with regards to how investor protection can be improved. Arguably, a successful corporate governance system should combine some type of large investors with sound legal protection for all shareholders (Shleifer and Vishny, 1997). Hence, in the following section I want to focus on a brief discussion of two proposed approaches – legal reform and ownership structure – to resolve the 'new' agency conflicts.

2.3.2.1. Legal protection

The extent of legal protection for investors varies considerably around the world. In countries such as the US and the UK the laws are protective of at least some investors and the quality of their enforcement is also good. However, in the rest of the world, the legal system is far from sufficient and the courts are less willing

to enforce their laws. Legal reform aimed at enhancing the legal system is arguably an effective way of improving corporate governance in countries with weak investor protection. Legal reform is, however, often slow and halting in many countries. Glaeser *et al* (2001) argue that in many countries government regulation of financial markets and the introduction of a powerful regulator could be more feasible. Their argument, put another way, is that the regulators, rather than judges, should take charge of the enforcement of legal rules. Xu and Pistor (2003) suggest that there is a substantial difference between how courts and regulators enforce laws. They argue that courts tend to enforce laws in a reactive manner, while regulators are proactive in law enforcement. Therefore, in many countries where court enforcement of laws and private contracts is not reliable, the introduction of a strongly motivated regulator might be an efficient and effective way of preventing harm in financial markets. Glaeser *et al* (2001) also provide supportive evidence on the positive role of the introduction of a powerful regulator by conducting a comparison study of two transition economies: Poland, with strict law enforcement by a highly motivated regulator, and the Czech Republic, with hands-off regulation. Despite starting with a weak legal system, financial markets in Poland experienced spectacular growth after the introduction of securities laws that were enforced by the powerful regulator. In 1996, a survey on corporate governance in four transition economies conducted by the Central European Economic Review revealed that the Polish market came out as the best and outscored the Czech market in all dimensions. Yet Glaeser *et al* (2001) acknowledge that there might be potential costs associated with the excessively aggressive legal enforcement when regulators are overmotivated to hunt for violations and penalise innocent suspects. Hence, the government regulation of

financial markets has certain limitations and cannot be considered as a substitute for legal reform in the long run.

2.3.2.2. Ownership structure

La Porta *et al* (1997, 1998, 1999, 2000b) argue that the highly concentrated ownership structures around the world are a consequence of weak investor protection. When an investor accumulates a large block of shares of a firm, he would then have the ability as well as the incentive to monitor, discipline and influence management. In this sense, the presence of large shareholders can protect shareholders from being otherwise expropriated by managers in a weak legal environment. Furthermore, it is worth noting that highly concentrated ownership could also partially resolve the classic free rider problem of having too many minority shareholders. The positive role of concentrated ownership has been documented by many prior studies (see, for example, La Porta *et al.*, 2002b; Claessens *et al.*, 2002). However, ownership concentration should be seen as a 'double-edged' sword and is often associated with a discrepancy between cash flow rights and control rights, arising from, for example, pyramid ownership structures, the use of high voting shares and cross-holdings. This discrepancy would probably encourage controlling shareholders to expropriate interests of minority shareholders, as discussed in Section 2.3.1. The increase of cash flow rights can only reduce the probability of controlling shareholders expropriating minority interests, but never eliminate it.

Unlike the US and UK markets, the presence of several large shareholders has been commonly found in the rest of the world (see, for example, Faccio and Lang,

2002; Claessens *et al.*, 2002). Hence, as suggested by Maury and Pajuste (2005), it might be imperative to investigate certain issues, such as the allocation of control between these large shareholders and their impact on firm performance. However, extant literature in this area remains sparse and the role that multiple large shareholders can play in a corporate governance system is not clear-cut. Some recent theoretical papers have presented some models for the interaction between multiple large shareholders, and many of them suggest a positive role of multiple blockholders in enhancing corporate performance. The rationale behind the positive role of multiple blockholders may be that mutual monitoring and competition for the acceptance of proposals among the multiple blockholders would effectively limit the incentive to abuse firms' resources. For example, Bloch and Hege (2001) introduce a model in which two large shareholders compete for corporate control by attracting the votes of small shareholders. They suggest that the competition for control between two blockholders can effectively reduce the appropriation of private benefits of control. Dhillon and Rossetto (2009) present a setting where multiple large shareholders have endogenous conflicts of interest that are associated with the relative size of their stake in a company. They argue that a single blockholder tends to choose an investment policy that is far away from those preferred by small shareholders, which would significantly reduce the share price. The presence of further blockholders can shift the policy more towards the small shareholders' preferred investment policy, thus increasing the share price.

Empirical evidence on the positive role of multiple large shareholders is available based on samples of different countries. Volpin (2002) claims that in Italy, the

firm market valuation is higher when a voting syndicate is formed to control the firm compared to when there is a single blockholder. Lehmann and Weigand (2000) provide evidence that the presence of a second largest shareholder improves the profitability of listed companies in Germany. However, it should be noted that in countries with poor investor protection, it could be beneficial for non-management blockholders to conspire with the controlling shareholder in the expropriation of minority shareholders. Faccio *et al* (2001) argue that blockholders in weak legal environments are more likely to collude to expropriate minority shareholders, based on their findings that the presence of multiple blockholders decreases the dividend rate in Asia rather than increasing it as it does in Europe. In the spirit of Faccio *et al* (2001), the positive role of multiple blockholders as an effective mechanism in enhancing firms' corporate governance is probably conditioned on a country's legal environment. In addition, it seems that firm value may also depend on the interaction between the blockholders. Exploiting a sample consisting of 174 Finnish firms during the period 1993 to 2000, Maury and Pajuste (2005) suggest that firm value is positively related to the presence of a third largest shareholder (a monitoring incentive), especially when the other two largest shareholders have blocks of roughly the same size. In contrast, the firm value is negatively related to the presence of a second largest shareholder (a collusion incentive), particularly when the first and second largest shareholders together own the majority of voting rights.

2.4. Conclusion

This chapter first discussed the 'classic' theory of agency problems introduced by Jensen and Meckling (1976) and then provided empirical evidence of these problems, which arise due to interest conflicts between the management and investors. Several internal and external mechanisms have been suggested to reduce costs caused by such conflicts, including executive compensation contracts, debt issuance, monitoring by boards of directors, presence of large shareholders and markets for corporate control. Among all five above-mentioned mechanisms, the presence of large shareholders (concentrated ownership) appears to be a 'cost-effective' way to address the 'classic' agency problems. However, as fully documented by La Porta *et al* (1998), this does come at a cost to minority shareholders. This cost ('new' agency conflicts) arising from the agency conflicts between the controlling shareholder and the minority shareholders has led to the creation of the ever growing body of LLSV 'Law and Finance' literature. In addressing the 'new' agency conflicts, researchers have suggested that the increase of cash flow rights and the presence of multiple blockholders are effective ways to restrict expropriation of minority shareholders. It is important to note, however, that the effectiveness of these ownership characteristics ultimately depends on the quality of the legal infrastructure in an economy.

CHAPTER THREE
ECONOMIC REFORMS, PRIVATISATION, CORPORATE GOVERNANCE IN CHINA

3.1. Introduction

China is the first socialist country that has undergone economic reform without the radical social reforms adopted by Eastern European and Former Soviet Union countries. Unlike these countries, which took a 'big-bang' privatisation approach, China has been determined to make its privatisation program take the form of a gradualist approach: a gradual but stable privatisation process as opposed to the mass privatisation in other former socialist countries. Since China's initial reform efforts began as experimental changes aimed at improving corporate performance rather than, as in Eastern Europe, establishing a complete Western-style market system, it is not surprising that institutional change has been gradual and uneven (Jefferson and Rawski, 1994). The main strategy involved in this privatisation program is a so-called '2-R strategy': 'Retain' government control of large state-owned enterprises (SOEs) that operate in the strategic sectors and 'Retreat' from small and medium-sized SOEs that operate in highly competitive markets (Liu *et al.*, 2006). Hence, the privatisation program in China actually started with only partial privatisation in the initial stages.

This unprecedented economic reform involves a radical change in emphasis on resource allocation and the redistribution of decision-making power between all five levels of Chinese government (center, province, prefecture, county and township) and enterprises. It is worth noting that the reform has two important features – decentralisation and privatisation. The decentralisation reform embraces the process of rearranging financial and controlling relationships between the government and SOEs, as well as those between the central and local governments. Arguably, the privatisation reform is the direct consequence of the decentralisation reform, since the decentralisation reform has resulted in a hardened budget constraint on both local governments and SOEs under their jurisdictions. The hardened budget constraint and increased competition have been argued to be the root causes for the initiatives of local government in China to launch the privatisation program of their SOEs (see, for example, Li *et al.*, 1999; Cao *et al.*, 1999). Although authorities have been determined to gradually decrease state holdings from the industry sector, it could still be anticipated that the state will continue to dominate the national economy in the forthcoming decades. It is worth noting that while the state's direct control at the micro level is being phased out, it still wields powerful leverage over state firms using state ownership (Ji, 1998). To summarise, the Chinese privatisation reform – transfer of property control and dilution of state ownership – is considered to be beneficial to national economic growth. Cao (2000) argues that China has created an economy with one of the highest growth rates in the world through a development strategy of gradual, market-oriented measures.

As the core issue to the national economic reform, the SOE reform in China has

spanned three main interrelated periods. During the first period from 1978 to 1992, the SOE reform was mainly focused on the separation of government from SOEs, the adoption of Management Responsibility Contract System (MRCS) and the encouragement of growth in the non-state sector. However, the reform during this period didn't reach its target of improving the efficiency of SOEs, even though the non-state sector stimulated the Chinese economy and showed promising prospects. In the second SOE reform period from 1992 to 1997, the Chinese government promoted economic growth through a build-up of a so-called Modern Enterprises System (MES). During this period, two important improvements were introduced into the Chinese corporate governance landscape: the establishment of the Chinese stock markets and the stock market laws and regulations (e.g. The Provisional Regulations on Administration of Issuing and Trading of Shares (PRAITS, 1993) and Company Law (1994)). However, the fundamental problem in the Chinese corporate governance system – the lack of clarity regarding property rights – still remained. The third period of SOE reform began in 1997 when President Zemin Jiang announced a policy of significant ownership diversification of the state sector through complete or partial divestiture of SOEs. As a result, corporate governance, for the first time, has been recognised as a top priority issue for Chinese economic reform.

Notwithstanding the progress in economic reform that China has made, it is always subject to a great deal of critical questioning about its determination in continuing with such a reform and the ways in which reform will be carried out. Clarke (2003) points out that a fundamental dilemma of Chinese reform arises from whether the state should maintain a controlling ownership in enterprises in

several sectors for the purpose of satisfying multiple social and political objectives, rather than solely for the purpose of profit maximisation. Hovey and Naughton (2007) suggest that in economic reform the state has to weigh various issues and maintain the complicated balance of them at all times. These issues are, to name but a few, the traditional power and influence of the Chinese Communist Party (CCP), the social issues (e.g. social well-being, unemployment and pension schemes), the equitable distribution of state held assets, the investment opportunities for domestic investors and the benefits of capital inflows by international investors. Typically, the phrase 'Crossing the river by feeling for the stones' has been the widely accepted way to describe the gradual, pragmatic, piecemeal and somewhat experimental nature of economic reform in China.

The remainder of this chapter is organised as follows: I will first discuss some issues in relation to state ownership and privatisation in Section 3.2. In Section 3.3, a brief discussion of economic reform and the main causes of SOE privatisation are provided. Since SOE reform is core to the Chinese economic reform, Section 3.4 will provide a review of three important periods of SOE reform. Given the importance of the establishment of stock markets in the development of the Chinese corporate governance framework, I intend to extensively discuss the characteristics of the Chinese stock markets and the current corporate governance practices of PLCs in Section 3.5 and Section 3.6, respectively. In Section 3.7, I will briefly discuss the influence of regional differences on the industrial sector in China. Finally, the conclusion of this chapter is given in Section 3.8.

3.2. State ownership and privatisation

Megginson and Netter (2001, p.322) suggest that "throughout history, there has been a mixture of public (often including religious institutions) and private ownership of the means of production and commerce". Over the past half century, a large battery of literature has emerged to theoretically and empirically test the relative efficiency between public and private ownership, and this has suggested that public ownership is inherently less efficient as compared with private ownership (see, for example, Boubakri and Cosset., 1998; La Porta and Lopez-de-Silanes, 1999; Claessens and Djankov, 1999; Fan *et al.*, 2007). It could be argued that public ownership theoretically belongs to all citizens of a nation, which in turn means that in fact no one can individually claim any residual rights to such ownership. The state is the *de facto* representative of public ownership. A case in point is the state-owned enterprises (SOEs) and, nowadays, China has the world's largest system of SOEs. Bolton (1995) suggests that the inefficiency of SOEs may arise out of a series of problems rooted in state ownership, such as the failure of the state in appointing and monitoring management, a lack of competition, soft budget constraints and excessive centralisation of the state sector. Additionally, Shirley and Walsh (2000) suggest that the state may impose some distorted (non-business-related) goals on SOEs, which could cause significant losses to SOEs.

Privatisation is believed to be an effective tool in improving firms' operating and financial performance. According to the literature, privatisation is thought to significantly benefit firms in several ways. Firstly, privatisation is capable of

mitigating agency conflicts between management and shareholders through the increased pressure imposed on managers by financial markets after privatisation(Jensen and Ruback, 1983; Vickers and Yarrow, 1991). Secondly, privatisation transfers ownership to private investors who are profit-oriented and incentivised to closely monitor management (Vickers and Yarrow, 1991). Last but not least, privatisation enables firms to focus more on profit-maximising targets instead of those related to social and political considerations, which could better align shareholders' interests and firms' objectives (Boycko *et al.*, 1996). Consequently, many governments around the world view privatisation as a feasible method of stimulating the industrial sector, reducing government interference and promoting economic efficiency. Over the past three decades, waves of privatisation around the world have been carried out by many countries in order to promote economic efficiency.

In China, the most predominant feature of the industrial sector is that state ownership is the dominant form in a large proportion of PLCs. Similarly, as found in many other countries, Chinese SOEs always perform poorly as compared to the privately-controlled enterprises in China. The intrinsic and fundamental problems of corporate governance in state-owned economic entities are deeply rooted in the ambiguity of property rights associated with state ownership (Lin, 2001). Furthermore, unlike private firms that are usually affected by classic agency problems, due to interest conflicts between management and shareholders, SOEs in China are often subject to a plethora of agency conflicts arising from the problem of multiple pseudo-principals. The logic behind the problem of multiple pseudo-principals is that in reality there are neither real owners nor any real

agents in SOEs. Since state ownership, owned by the whole population, does not belong to anyone in particular, the state takes the role as representative of the public. The state also acts as the owner (principal) of the people to delegate operational rights over SOEs to the managers and to monitor their day-to-day operations. However, the state is essentially the second-order agent itself of the true owners – all citizens, who yet have no actual voice in corporate governance of SOEs (Lin, 2001). In other words, there is no direct connection between the first-order agents (managers of SOEs) and the true owners (the public). The problem that the control rights of SOEs are vested in second-order agents – the state, who nominates and monitors the first-order agents – could be the root cause for corporate inefficiency in the Chinese economy. Su (2005) argues that in addition to the classic agency problem that arises out of the separation of ownership and control in traditional corporate finance literature, SOEs are believed to have suffered from further agency problems. Those further agency problems lie in the conflict of interests between politicians and enterprises (Shleifer and Vishny, 1994). Su (2005) suggests that there could be political costs of government control for SOEs in China and the government administrative interference in SOEs' day-to-day operations may eventually result in a reduction in a firm's value. Due to the reasons mentioned above, before enterprise reform SOEs in China were seriously burdened with a bundle of social and political considerations for both central and local governments. In the 1990s, privatisation in China started to accelerate after a decade of nationwide policy debates and privatisation, as a means of improving firms' performance, had gradually gained in popularity among officials in the Chinese Communist Party (CCP) (Gao, 2010).

3.3. China's economic reform and SOE privatisation

Since 1978[2], when China adopted its 'open-door' policy and began its economic reform, it has commenced waves of privatisation within its public sector: the largest ever in its history. Adhering to what Deng Xiaoping called 'socialism with Chinese characteristics', the Chinese privatisation departs remarkably from the approach to privatisation most commonly adopted by other socialist countries and sets a strategy of gradualism to the centre. Cao (2000) argues that Chinese privatisation can be characterised as 'privatisation with Chinese characteristics', which merely adopts market-oriented measures to create a market economy, while retaining an enormous ownership base in the hands of the state. In essence, Chinese privatisation emphasises not the transfer of the state sector into private hands, but rather the creation of a parallel private sector designed to supplement the state sector, as well as the retention of the public ownership base that is symbolic of a socialist economy (Cao *et al.*, 1999). In stark contrast, Eastern European countries have adopted a much more rapid privatisation ('big-bang') strategy, characterised by the immediate privatisation of the state sector and the swift transfer of state-owned assets to private investors. The 'big-bang' strategy, widely used in the Eastern European countries, was a shock therapy that involved smashing the entire system, correcting or eliminating as many rent-seeking opportunities arising from distortions and privileges, and finally commencing a bottom-up reconstruction of the whole edifice (Naughton, 2007).

[2] China's economic reform was officially launched at the third Plenum of the eleventh Central Committee of the CCP in December 1978.

China started the reform of its planned economy with an unclear official objective: 'establishing a socialist market economy with Chinese characteristics' (Hou, 2011). Such an unclear objective provided neither a blueprint nor a clear ultimate objective for the reform. As a result, the reform has been characterised as piecemeal, partial and even somewhat experimental, as opposed to the 'big-bang' approach adopted in most Eastern European countries, where the predominant objective of economic reform was to move as rapidly as possible to a market economy. Su (2005) also suggests that China's gradual and pragmatic economic reform has obviously manifested the Chinese government's concern about the possibility of political and economic turmoil that is accompanied by mass privatisation, as happened in the former Soviet Union and other Eastern European countries. Hence, the general guideline for economic liberalisation in Post-Mao China has been described as 'Crossing the river by feeling for the stones'. Cao *et al* (1999) suggest that there are two prominent aspects that capture an important feature of privatisation. On the one hand, privatisation in China means directly transferring part of the existing ownership to private investors. On the other hand, it means expanding the existing ownership base with new private investment. Morris *et al* (2002) argue that privatisation has occurred in two main areas: private and foreign-invested enterprises are encouraged at the macro-economic level and the remaining SOEs are forced to face market forces, to a greater degree. Gibbons and Kulkarni (2011) suggest that the reform was a 'dual-track' approach that involved both the retention of part of a planned economy system and the creation of a new market economy system.

Chinese economic reform has been considered to have taken a gradualist

approach, with an experimental start for all new reform projects. Every new reform will at first only be carried out as a trial run on a regional scale and will be applied later at the national level if, and only if, it is considered successful by central government. For instance, the reform of the state industrial sector started in 1980 with the 'Sichuan experiment', and by granting more autonomous power on both production and material to the managers of SOEs, the experiment was set to increase business efficiency and vitality. The 'Sichuan experiment' proved successful after a four-year trial period and then central government stipulated the expansion of autonomy to all SOEs. The gradualist approach of economic reform has also been manifested in a way that over the years both the content and the pace of reform have been adjusted and continuously reformulated according to new circumstances and challenges (Naughton, 2007). By the mid-1990s, China had successfully moved away from the planned economy and a socialist market economy began to function. However, even today, China's market economy is by no means close to complete, and further economic reform and institutionalisation are needed in order to complete its currently rudimentary market institutions.

Morris *et al* (2002) suggest that there are two major features of the reform process, decentralisation and privatisation, and it is the former that sets up the political and economic basis for the latter. China's decentralisation policy has two salient features: the first – 'fiscal deregulation' – is focused on setting up a fiscal revenue contracting system[3] (1980-1993), which is a revenue-sharing system between the central and local governments, and the second – 'SOE deregulation' – is focused

[3] The fiscal revenue contracting system was later replaced by the tax-revenue-sharing system in China's tax and fiscal reform.

on delegating the majority of SOEs to local governments (Li *et al.*, 1999). Arguably, the economic reform in China initially began as a bottom-up, local government driven process of privatisation, which was then accepted and even encouraged by central government. Cao *et al* (1999) suggest that such a bottom-up reform stems from the 'federalism of Chinese style[4]', which is a result of the decentralisation of government in China's earlier reform. What are the incentives to local governments in China to promote privatisation? The hardened budget constraints and increased competition from the non-state sector are the main incentives for local governments in China to privatise SOEs. The soft budget constraints are widely considered as one of the root causes for corporate inefficiency in the transition economies. Cao *et al* (1999) point out that enterprises or governments may show a lack of incentives to improve operational efficiency if they can be endlessly bailed out. Set as one of the major objectives of the economic reform, hardening the budget constraints of SOEs in China began with tightening the budget constraint of local governments and SOEs under their supervision, which in turn induced waves of privatisation of SOEs around China[5]. The SOE privatisation process in China initially started at the local level and was later accepted, and even promoted, by central government and then spread all over the country. In addition, Li *et al* (1999) point out that national market integration has greatly intensified the cross-regional competition in China, and the competitive pressures on local governments to attract foreign investment and fiscal support from central government have had a great impact on privatisation.

---

[4] See Cao *et al* (1999) for details.

[5] Cao *et al* (1999) argue that the Chinese path for SOE reform stands in contrast to SOE privatisation in Eastern European countries where the aim of privatisation was to harden the budget constraints of firms.

By analysing the cadre evaluation system in China, Liu *et al* (2006) suggest that local leaders may have an incentive to privatise SOEs in order to enhance local economic prosperity. The point is that local leaders are evaluated by a complicated system of 'soft targets', which central government may use to make promotion decisions and, all else being equal, local economic growth records would be a key 'hard target' in the evolution system. In the following sub-sections a brief discussion of the main causes for China's gradual and quiet privatisation – i.e. hardened budget constrained by fiscal reform as well as banking reform and intensified competition from the non-state sector – will be presented.

3.3.1. China's fiscal and tax system reform

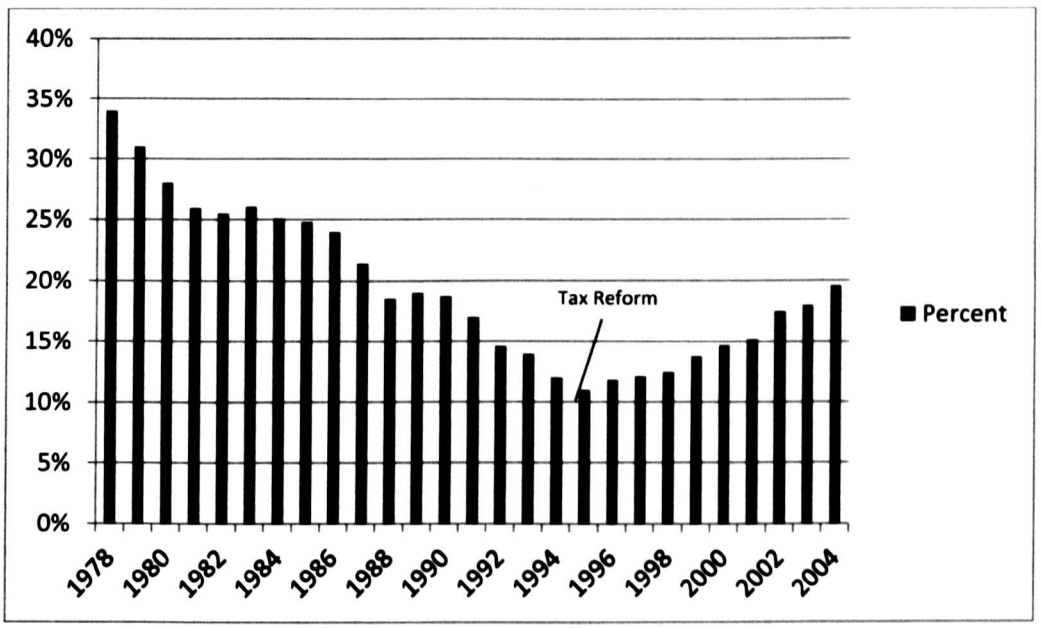
Once the mechanisms[6] of the Chinese planned economy began to collapse, the immediate impact was a rapid and dramatic erosion of the formal revenue system. China witnessed the sharpest decline in budgetary revenue since the launch of its market economy reform in 1978, with the budgetary revenue as a share of its total nominal GDP down by nearly 20 per cent during the period 1978-1993. In order to stop the decline of the budget, the Chinese central government carried out the 1994 fiscal and tax system reform[7] that was aimed at broadening the tax base and enhancing the fiscal capacity of the Chinese government, and soon after the reform the Chinese government's fiscal extractive ability, indicated by the budgetary revenue share of the country's annual GDP, started to increase

[6] The mechanisms of the planned economy could consist of administrative prices, compulsory procurement and planned delivery, and a monopoly state ownership of industry (Wong and Bird, 2008).

[7] This reform was based on the 'Decision on Implementation of Management System of Taxes' put forth by the State Council on December 15, 1993 (Hou, 2011).

continuously in the following years, as shown in Figure 3.1. It is worth noting that although the major fiscal reform of 1994 expanded the fiscal revenue base for the Chinese government, it had exactly the opposite effects on central and local governments. That is, it enhanced the fiscal extractive power of the central government while reducing that of the local governments by imposing tougher budget constraints on them.

Figure 3.1 Budgetary revenue share of GDP



Source: China Statistical Yearbook, 2005.

Before the economic reform central government was responsible for determining all expenditures for important future developments, while responsibilities for delivering public administration and social public services (e.g. education, housing and health services) at the local level were all delegated to local governments. In principle, those social services were all financed by central government. Starting from 1980, China adopted its fiscal decentralisation policy,

i.e. the fiscal revenue contracting system, to let local governments have increasingly more power in financing their own needs. The basic logic behind the fiscal revenue contracting system is pre-estimating and apportioning revenues and expenditures between central and local governments, while holding the latter accountable for their own profits and losses. However, the revenue contracting system at that time did not establish a clear set of rules for the revenue-sharing ratio between central and local governments. In reality, the sharing ratios set annually by central government were actually negotiable in nature and could even vary across different regions. More generally, the Chinese tax system rested on the local collection of vested revenues that were then conveyed to central government, leaving local governments with sufficient space to retain collected revenues that they should have remitted to the centre. The administrative structure of such a tax system had proven vulnerable to erosion, especially when the economic control of central government lessened, and it is not a surprise to see local governments in China often shielding local enterprises from taxation and avoiding sharing profit remittances with central government (Wong and Bird, 2008). The fiscal reform of 1994, in essence, therefore aimed to 'recentralise' the fiscal system and its main content included three important components: (1) simplifying the tax structure by replacing the Soviet-Union-style complex multi-tiered system of turnover taxes with a single-rate value added tax (VAT); (2) shifting from the former negotiated revenue-sharing system to a new tax-revenue-sharing system by clearly determining national taxes, local taxes and shared taxes[8] (for example, VAT would be shared by central and local government at a

[8] See Table 4.1 in World Bank (2002) for a summary of the tax assignments between central and

fixed ratio of 60:40); (3) reconstructing the formal tax administration by splitting the local tax bureaus into two distinct segments: a national tax administration and a local tax administration, which were responsible for the tax collection for central and local governments, respectively. Arguably, this fiscal reform effectively hardened the budget constraints of local governments and, by assigning the collection of central taxes and VAT to the national tax administration, the reform largely eliminated opportunities for local governments to reduce, exempt or retain taxes that they were supposed to deliver to central government. In addition, in 1995, the new 'Budget Law' was implemented to impose stringent guidelines on the government's deficit financing in the financial markets. It required local governments at all levels to balance their budgets and strictly controlled their borrowings in the financial markets.

The 1994 fiscal reform was by no means the end of fiscal reform, but merely marked the beginning of the whole process. China's current fiscal-tax system could be seen as a product of a series of changes over the past two decades and it is now functioning much better than ever before according to Western standards. Yet the system is still far from flawless, with many critical fiscal problems remaining after the 1994 fiscal reform. In recent years, for example, two of the most prominent fiscal issues in China have been the growing fiscal disparities across regions and the mismatch of expenditures and revenues between various levels of the government. Clearly, China's current fiscal-tax system is still a system in transition and heavy workloads could be expected in the future. 'China

---

local governments.

will further deepen its fiscal-tax system reform in a bid to enhance transparency of fiscal budgets and improve tax policies', said Finance Minister Xie Xuren at the 2012 China Development Forum.

3.3.2. China's monetary and banking reform

China's central bank, the People's Bank of China (PBC), was founded in December, 1948 and its headquarters were originally established in the capital city of Hebei Province, Shijiazhuang, but were soon moved to Beijing in February, 1949. The PBC, as China's central bank, is responsible for formulating and implementing the national monetary policy. It is also responsible for drafting and enforcing relevant laws, rules and regulations, regulating the financial markets[9], managing the state foreign exchange and gold reserves, maintaining the country's financial stability and establishing a steady CNY exchange rate system. However, the PBC used to have a dual role and was in charge of both the central banking and all commercial banking operations in China (i.e. the monobank system) before the economic reform. It was not until 1983 that the State Council stripped the PBC of its commercial operations, which were then handed over to four independent state-owned specialised banks, and made it function solely as the central bank. The status of the PBC as the central bank was legally confirmed on March 18, 1995, when the 'Law of the People's Republic of China on the People's Bank of China' was passed at the 3rd Plenum of the 8th National People's Congress (NPC).

[9] The inter-bank lending market, the inter-bank bond market, foreign exchange market and gold market.

The four state-owned specialised banks are the so-called 'Big Four' banks[10] in China. They are the Industrial and Commercial Bank of China (ICBC), the Agricultural Bank of China (ABC), the China Construction Bank (CCB) and the Bank of China (BOC), each of which was purposely built for providing banking services in given areas. For example, the ABC specialises in providing financing to China's agricultural sector and offering wholesale and retail banking services to peasants, township and village enterprises (TVEs) and other rural institutions. In accordance with the 'Law of the People's Republic of China on Commercial Banks' enacted in 1995, the Chinese government commercialised the operations of the 'Big Four' banks, bringing them up to international standards (i.e. the Basel Accord) for bank assets and risk management and, as a result, these four former specialised banks were transformed into state-owned commercial banks. In addition, in 1994, the 'Big Four' banks started to hand over their government-directed (policy) spending functions to three new policy banks: the Agricultural Development Bank of China (ADBC), China Development Bank (CDB) and the Export-Import Bank of China (EIBC). Arguably, the establishment of these three new policy banks has substantially reduced the burden of the 'Big Four' banks with respect to financing government-directed trade and development projects and made them become more profitability-oriented and more conscious of the quality of issued loans (Lin and Zhang, 2009).

[10] Besides the 'Big Four' banks there are a number of smaller commercial banks in China. The most famous among them are the Bank of Communications, China CITIC Bank, China Everbright Bank, HuaXia Bank, China Minsheng Bank, Guangdong Development Bank, Shenzhen Development Bank, China Merchants Bank and Shanghai Pudong Development Bank. After the accession into the World Trade Organization (WTO), as part of its commitments to the WTO, China released the 'Rules for Implementing the Regulations Governing Foreign Financial Institutions in the People's Republic of China' in January 2002. By the end of 2006, foreign banks (financial institutions) have been permitted to provide local currency business to all Chinese enterprises and individuals, allowing them to fully compete with their Chinese counterparts on a fair basis.

The Chinese banking system, though large in absolute terms, was characterised by massive government intervention, poor asset quality and low capitalisation before the monetary and banking reform (Garcia-Herrero *et al.*, 2006). Garcia-Herrero *et al* (2006) also point out that since the banking sector is the main fund provider of China's large SOE system, its reform is believed to have an important and direct impact on SOEs. In 1993, after Vice-premier Zhu Rongji took over his concurrent post as the governor of the central bank, the State Council formally declared the launch of China's monetary and banking reform of which the first and foremost target was to centralise the PBC's operations. According to the 1995 'Law of the People's Republic of China on the People's Bank of China', under the supervision of the State Council the PBC should have full autonomy in drawing up and fulfilling its monetary policies. However, before the monetary and banking reform, the PBC's local branches were under dual-supervision and they were actually required to report to both central and local governments (Cao *et al.*, 1999). It was the dual-supervision that empowered local governments to exert substantial influence on the PBC's monetary policy and credit allocation decisions. Before 1994, the PBC's local branches issued around 70 per cent of the total central bank's loans to state-owned banks. The majority of these loans would then be delivered to SOEs by the local branches of state-owned banks, resulting in a high level of non-performing loans (NPLs) in the banking system. However, the risk of a build-up of new NPLs could never be eliminated with the presence of substantial government intervention in the Chinese banking system.

When China was under the planned economy the whole country could be considered as a single large company, whose business decisions were centrally

determined, with all the SOEs being merely its production units. In such a planned economic system, SOEs were almost completely financed by the state budget with little debt. Since the post-1978 economic reform, managers have been given more autonomous power to run SOEs. Managers were given more control rights in firms' production, investment, sales and personnel management. Also, they were allowed to retain some of the firms' profits. Importantly, it should be noted that after the economic reform SOEs in China were required to be responsible for their own losses. Since the economic reform the government has gradually replaced the budget finance with debt finance for SOEs by redefining the financial arrangement or relation between SOEs and state-owned banks. Su (2005, p.120) suggests that "the Chinese government remained responsible for final losses of SOEs, mainly through state-owned banks".

In countries like Japan and Germany, where banks are major financiers to firms, the governance role of banks is widely found to have positive effects on firms' corporate governance systems. When they hold a substantial claim on a firm, a bank is greatly driven to monitor the firm's day-to-day operations as well as disciplining its management. A bank will do this in order to make sure that the firm produces a satisfactory corporate performance and fulfils its financial obligations (Jensen, 1986). However, such a positive role may not be expected from any of the Chinese state-owned banks. Since the 1995 monetary and banking reform the commercial bank lending, mainly from the 'Big Four' banks, has been a substitute for the budget-grant-allocations to a large extent. Most bank loans issued to SOEs are actually directed by governments at different levels, in which banks never conduct serious screening process on borrowers. Continuous

bank loans issued by state-owned banks, on non-commercial terms, have kept alive a number of inefficient firms during the reform period. Moreover, these inefficient firms actually stood little chance of paying back their loans in due course, which inevitably led to a large build-up of NPLs in the state banking sector, particularly in the second half of the 1990s. Arguably, the failure of the Chinese banking system and the accruement of NPLs arose from several factors. Firstly, the Chinese government is both creditor and debtor of SOEs. Such a dual role of the Chinese government is often associated with the soft budget constraint – defined as the expected re-negotiability of old debts and issuance of new debts to SOEs, even when they are making losses (Tian and Estrin, 2007). In this sense, the managers of SOEs are inclined to treat bank loans as a viable way of getting government financial support and they feel little pressure to repay them. It is worth noting that constant government bailouts could substantially undermine the efforts to harden the budget constraints of SOEs. Secondly, state-owned banks are often instructed by governments at various levels to support many unproductive projects and save inefficient SOEs. Due to the constant government control over the lending process, and the continuing ruling of the CCP, politicians have found it fairly easy to use resources in the banking system to fund projects for non-commercial purposes (e.g. patronage or showcase purposes) and to compensate losers in the economic reform (Naughton, 2007). Thirdly, the steady accruement of NPLs undermined the base of the banking system's own ability to pay off their bad loans. When the 'Big Four' banks were separated from the monobank system in the mid-1980s, their capital adequacy ratios (CARs) were well above the demanded standard, which is 8 per cent of total assets set by the Basle Accord. However, as instructed by the government, the state-owned banks used to

continuously write off various kinds of loans, which dragged down the average CAR of the 'Big Four' banks to around 6 per cent of total assets by the end of 2002. Together with the increase in the share of NPLs in total loans, the decrease of CARs in the state banking system has led to a steady erosion of its own financial resources, particularly in the late 1990s and early 2000s. Naughton (2007) suggests that state-owned banks were technically unable to resolve their problems on their own. In a bid to weaken the influence of local governments, fundamental restructuring was carried out in the banking system during the second half of the 1990s. In late 1998, the PBC abolished all of its local branches and set up nine regional branches[11], and the operating boundaries of these regional branches did not necessarily overlap with local administrative boundaries. Such fundamental administrative restructuring in the banking system, together with the adoption of macro-economic austerity that was targeted for the fight against rising inflation at that time, imposed a much tighter budget constraint on the state-owned banks (Naughton, 2007). Shortly after this restructuring the state-owned banks, particularly the 'Big Four' banks as main financiers to SOEs, were also required to centralise their operations, and their local branches soon found themselves facing tougher standards on commercial bank loan issuance, which in turn placed a harder budget constraint on SOEs. Given that the 1994 fiscal reform did not curtail the seemingly endless government lending to SOEs through state-owned banks, it can be argued that the budget constraint of SOEs could not have been effectively hardened without the 1995 monetary and banking reform.

---

[11] These nine regional branches are Shanghai branch, Tianjin branch, Shenyang branch, Nanjing branch, Jinan branch, Wuhan branch, Guangzhou branch, Xi'an branch and Chengdu branch.

Even though much progress has been made in China with regard to improving its banking system since the monetary and banking reform, there is still a long way to go to achieve a stable banking system. In 1998, the Chinese government injected 270 billion CNY or 32.6 billion USD of capital into the 'Big Four' banks and, in 1999, four state-owned asset managing companies (AMCs) were established to take over some of these banks' NPLs (1.4 trillion CNY, roughly 20 per cent of their total loans). The AMCs are responsible for liquidating NPLs for as much residual value as possible by repackaging and selling them to investors (Naughton,2007). Notably, the government capital injections and the establishment of four AMCs (one for each of the 'Big Four' banks) were aimed at constructing a healthier capital structure for the 'Big Four' banks and encouraging them to make presumably more prudent commercial bank loans. As of 2005, the ratio of NPLs to total loans has been dramatically reduced to 10.5 per cent for the 'Big Four' banks, when it was above 30 per cent in 1997. In 2003 the China Banking Regulatory Commission (CBRC) was officially launched to take over the supervisory role of the PBC to regulate the banking sector, which is aimed at improving the efficiency of bank supervision as well as strengthening the role of the PBC in the making and implementation of China's national monetary policy.

3.3.3. Competition from the non-state Sector

3.3.3.1. Non-state-owned enterprises: township and village enterprises

When the former CCP leader Deng Xiaoping and his colleagues started the economic reform in 1978, it was the first time ever that various types of non-state ownership were legally permitted to co-exist with state ownership in the Chinese

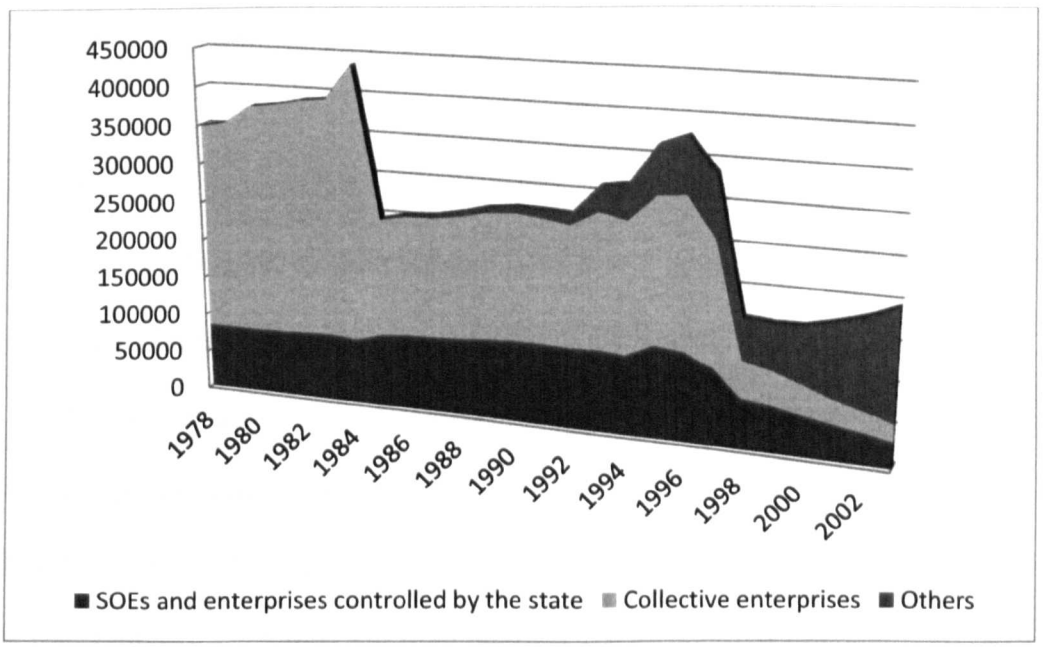
economy. In the 1980s, despite enormous resistance to the rise of non-state ownership, the non-state sector experienced an unprecedented development. After Deng Xiaoping's 'Southern Tour' in 1992, it gained a new momentum to accelerate its expansion. Non-state-owned firms were allowed to be more involved in sectors that used to be monopolised by SOEs, except for strategic sectors such as electricity, telecommunications, oil and the defence industry. By the mid-1990s, the industrial output produced by the non-state sector was already equivalent to that of the state sector. Cao *et al* (1999) argue that the rapid expansion of the non-state sector in the 1980s and 1990s had made it a major competitive force for SOEs, and SOEs supervised by local governments were faced with more competition pressure than those supervised by central government. This is because most SOEs supervised by local governments are small and medium-sized firms whose business areas are more likely to overlap with those of non-state-owned companies in competitive industries. Arguably, the boom of the non-state sector played a vital role in introducing extra competition into previously state-dominated sectors, and this is particularly true during the first twenty years of the reform. The extra competition from the non-state sector significantly increased the losses of inefficient SOEs, which in turn increased the government's cost of keeping alive those SOEs. Thus, the government, particularly local governments, were forced to start considering deepening the economic reform by privatising inefficient SOEs under their supervision. Among all the different types of non-state ownership, the collective enterprises were more ideologically favoured, and thus encouraged by government officials, because they are not completely privately-owned enterprises but 'public' enterprises. As a result of rural industrialisation, the township and village enterprises (TVEs), a

typical form of collective enterprise, have been considered as one of the major driving forces behind the rapid expansion of China's non-state sector and fast economic growth in the early stages of the economic reform (Li *et al.*, 1999). In 1995, TVEs, as a whole, produced nearly 30 per cent of China's annual GDP and contributed around 17 per cent of total government revenue. Moreover, during the golden period of TVEs (1978-1996) they acted as the catalyst that China needed to transform its whole economy from a centrally-planned economy to a market economy (Naughton, 2007). TVEs outperformed SOEs in many industries and thus exerted great pressure on them. It can be argued that TVEs have great advantages in terms of corporate ownership structure, corporate governance system, personnel system, labour relations and conditions of institutional arrangement, as compared to their state-owned competitors (Perotti *et al.*, 1998).

Although TVEs have undoubtedly been an important engine for China's rapid economic growth, their success has greatly challenged the standard property rights theory. As some economists have pointed out, collective enterprises, including TVEs, do not have clearly defined property rights (see, for example, Weitzman and Xu, 1994; Li, 1996). Typically, they are collectively owned by citizens living in rural communities, such as towns and villages, and so all the community members are nominal owners. However, none of the nominal owners have the exclusive rights of ownership associated with traditional property rights theory and there is no residual claimant in the conventional sense (Weitzman and Xu, 1994). In practice, the property rights of TVEs can only be executed collectively through the representatives of the community. In most cases, the community governments are the *de facto* executive owners/representatives of

TVEs. TVEs are, in fact, considered to be merely a transitional type of ownership at the early stages of the economic reform and the problem of their vaguely-defined property rights should be resolved as the economic reform moves on. Hence, after 1996, the government began to privatise collective enterprises in various forms, such as 'shareholding companies' or 'shareholding cooperatives' or simply 'selling-out' (Li *et al.*, 1999). Figure 3.2 shows that collective enterprises enjoyed a rapid expansion in the whole economy during their golden period, from 1978 through 1996, but suddenly shrank in 1997 when the Chinese government shifted the policy and decided to launch a massive privatisation of collective enterprises throughout the whole country.

Figure 3.2 Number of enterprises in China[12]



Source: China Statistical Yearbook, 2003.

[12] In 1984 the first shareholding company was established in China and collective firms are encouraged by the governments at different levels to transform into shareholding companies.

3.3.3.2. Foreign direct investment (FDI)[13]

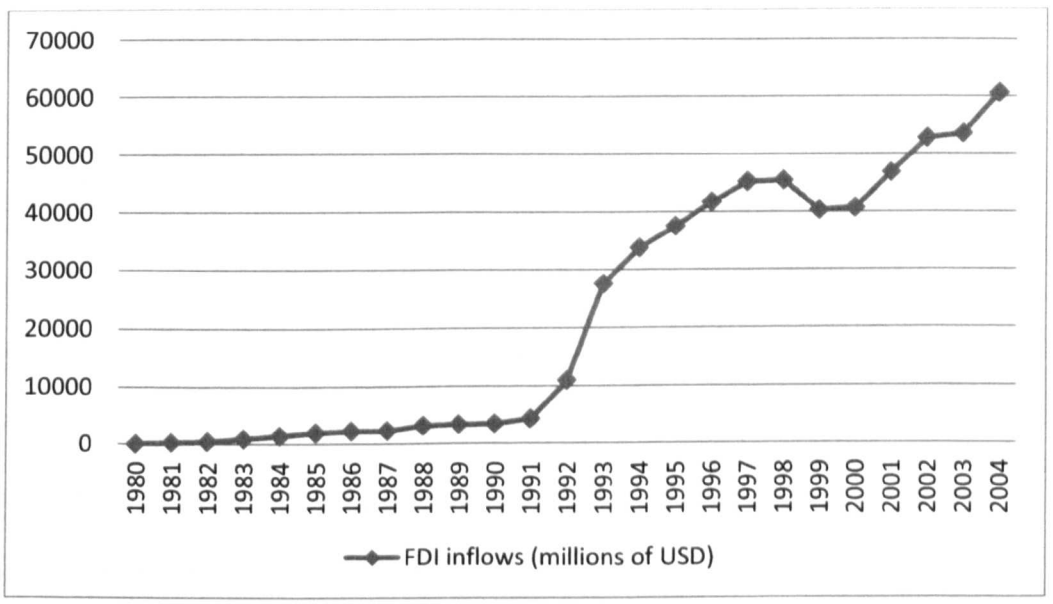
Since the launch of the economic reform, China's inward FDI has risen dramatically under the open-door policy and the pivotal role it has played in boosting the non-state sector of the whole economy has attracted more and more attention from within and outside China. The nationwide impact of FDI in China was moderate during the 1980s and FDI inflows were largely restricted to four special economic zones (SEZs). The speed of China's annual FDI growth has been greatly accelerated since 1992, when the Chinese government reaffirmed its policies of openness and market-oriented reforms. As shown in figure 3.3, the annual FDI inflows were only 4.4 billion USD in 1991, but they rocketed up to 11 billion USD in 1992 and 60.6 billion USD in 2004. In 2008, China overtook the USA and became the world's largest recipient of FDI. Figure 3.4 clearly shows a steady upward trend in China's FDI inward stock from 1980 to 2004.

Naughton (2007) summarises three distinctive characteristics of China's inward FDI. Firstly, FDI has been the predominant form of global capital resources for China. Secondly, the majority of Chinese inward FDI inflows have been confined to the manufacturing industry. Thirdly, an outstandingly large proportion of Chinese FDI has come from other East Asian economies, especially Hong Kong and Taiwan. At the national level, prior empirical research has demonstrated the importance of FDI for China's economic growth over the past three decades (see, for example, Chen *et al.*, 1995; Buckley *et al.*, 2002). Large FDI inflows have led to a large and ever-growing number of foreign invested enterprises (FIEs) that

[13] The Chinese inward FDI flows include capital flows from Hong Kong, Macau and Taiwan.

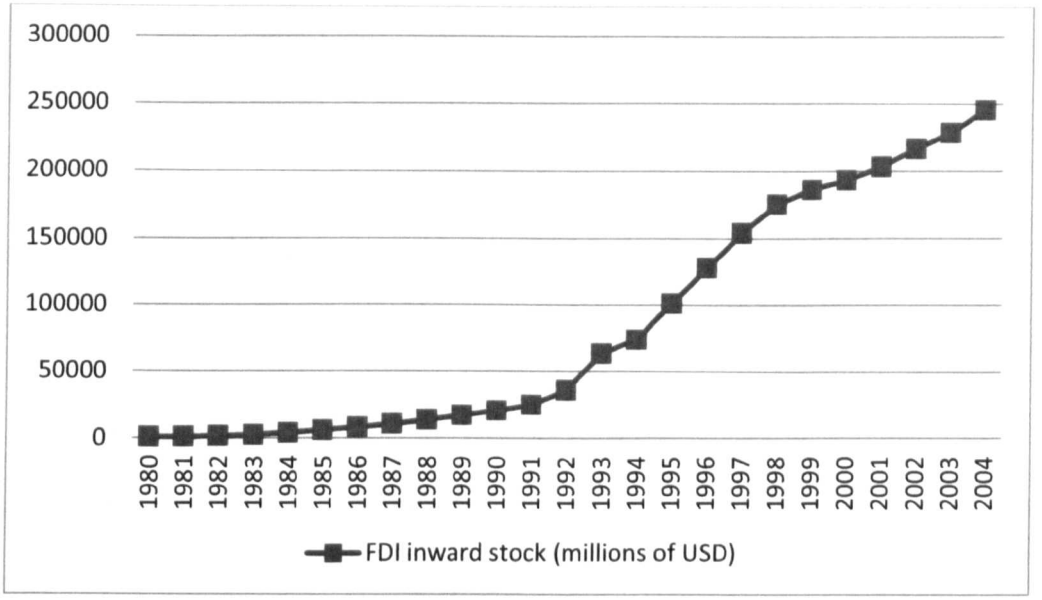
often (but do not exclusively) take the form of joint ventures between foreign firms and Chinese enterprises. Typically, in the FIEs, foreign firms are major suppliers of capital, techniques, product design and a sales network abroad, while Chinese enterprises are often the providers of land and labour (Whalley and Xin, 2006). The share of total national industrial output from FIEs has increased dramatically since 1992, and in some regions FIEs have even become one of the major power engines behind regional economic growth. For example, Cao *et al* (1999) found that in 1994 the share of industrial output from FIEs was 12 per cent nationwide (5.6 per cent in 1992), 20 per cent in Jiangsu, 24 per cent in Beijing, 51 per cent in Shenzhen and 70 per cent in Xiamen.

Figure 3.3 FDI inflows



Source: China Statistical Yearbook, 2005.

Figure 3.4 FDI inward stock



Source: China Statistical Yearbook, 2005.

Although FDI inflows have substantially contributed to China's two-digit economic growth over the past three decades, their impact on most of China's domestic enterprises, especially SOEs, has been multifaceted. On one hand, FDI has brought in a bundle of resources such as management experience, market channels, technology, capital inflows and other non-capital inflows of resources (Naughton, 2007). China's domestic enterprises, mainly through their cooperative partnership with foreign investors in FIEs, could have greatly benefited from those resources. Indeed, in the past three decades FDI has played a vital role in China's industrial technology development, industrial growth and industrial structure upgrade. On the other hand, the incoming FDI has eroded SOEs' profit margins to a large extent by dramatically increasing the market competition, especially in the manufacturing industry. Compared with SOEs, FIEs may have advantages in areas such as product design, product quality, technology, ownership and corporate governance structures, and business experience.

Furthermore, Whalley and Xin (2006) suggest that the labour productivity of FIEs could also be one of their major advantages, and that this figure was around nine times that of China's domestic enterprises in 2004.

3.4. Enterprise (SOE) reform in China

It could be argued that enterprise reform is the central issue of the entire economic reform process. Over the past three decades, China has made every endeavour to develop the institutional foundations of a modern and functioning corporate governance system. The enterprise reform, or SOE reform, in China could be divided into three interconnected phases. In the first phase (1978-1992), the SOE reform began with the Management Responsibility Contract System (MRCS) in 1987, which was aimed at transferring the management authority from the government to SOEs' managers and shielding SOEs from political intervention. Under the framework of MRCS, managers of SOEs were allowed to have some specific control rights in production, investment, sales, profits and personnel management (Su, 2005). They also gained the rights to retain part of their profits, all of which used to be vested and conveyed to the state under the planned system. The main theme of the MRCS was to effectively separate the ownership and control of all SOEs and to make them more focused on profit-maximising activities. However, there existed a critical defect in the MRCS, mainly due to the asymmetric information between the government and managers of SOEs. In the presence of such asymmetric information it could be fairly easy for mangers to hide the true situation of SOEs from the government. Su (2005) suggests that under MRCS the profit retention by managers had no downside,

while the state was always held responsible for SOEs' final losses through state-owned banks, resulting in an ever-bloating triangle of debts between the government, SOEs and state-owned banks. To summarise, the first phase of SOE reform in China did not successfully introduce functioning incentive contracts between the management and the state, nor did it effectively prevent considerable administrative intervention from the government in SOEs' operations.

The second phase (1992-1997) of SOE reform could be largely characterised as the reform that was to set up a Modern Enterprise System (MES) for all Chinese SOEs. The second phase of the SOE reform began in 1992 after Deng Xiaoping's 'Southern Tour', during which the government declared its ambition to realise its official goals of SOE reform, and one of the key goals was the establishment of an MES. Given the failure of the MRCS, the state council decided to terminate the MRCS nationwide in 1994 and introduced the MES instead. Under the MES, firms' outstanding shares are classified into five types. These are state, legal-person (LP), employee, tradable A-shares and offshore shares. Regardless of the share type, all shares have the same voting rights. Tradable shares are those shares not retained by the government and state enterprises, and these can be transferred to outside investors in the form of initial public offerings (IPOs) and seasoned equity offerings (SEOs) (Su, 2005).

The MES was described as being characterised by clearly quantitatively delineated property rights, well defined rights and responsibilities, financial independence and accountability, immunity from government intervention and scientific management (Morris *et al.*,2002). The Chinese government adopted

various methods, mainly through corporatisation and integration, to build up the MES in SOEs. Arguably, corporatised SOEs were restructured along the same lines as Western-style corporations and had well-defined shareholder rights. In contrast with traditional or former SOEs, they usually took the form of limited liability companies and joint-stock companies. In the meantime, the government carried out a nationwide integration project that encouraged some SOEs to acquire or merge with some other SOEs, both vertically and horizontally, in order to form large enterprise groups (conglomerates), which were modelled after Korean chaebols. The formation of large enterprise groups was mainly aimed at enhancing the SOEs' capabilities to compete internationally. In 1994, the Chinese government brought the SOE reform a big step forward by introducing the Company Law which statutorily requires all companies to have two important corporate governing bodies – the general meeting of shareholders and the board of directors – and two corporate positions – the chairman of the board of directors and the chief executive officer (CEO). Moreover, the Company Law also provides a general statutory guideline for all other important corporate issues, such as corporate structure, ownership transfer, issuance of corporate bonds and IPOs.

Although the theme of the MES reform programme was to make SOEs subject to a greater degree of market discipline and avoid government interference in the running of these SOEs, the outcome of the reform were found to be disappointing. During this period, China sought to improve the corporate governance of SOEs through corporatisation instead of privatisation. The principle of the reform was the 'separation of government from management', which aimed at preventing

political interference in SOEs by allowing managers of SOEs to enjoy greater managerial autonomy and incentives to run SOEs on a profit-maximisation and market-orientation basis. However, the corporate performance of SOEs, after corporatisation, was again found to be unsatisfactory. Indeed, the performance of SOEs has greatly deteriorated in the 1990s, causing adverse impacts on China's macroeconomic stability. Official data (China Statistical Yearbook, 1998) shows that profits of industrial SOEs decreased from 81.7 billion CNY in 1993 to 42.8 billion CNY in 1997, while losses increased and almost doubled from 45.3 billion CNY to 83.1 billion CNY. Lin (2001) points out that the actual corporate governance of corporatised SOEs can be characterised by excessive power of CEOs, insider control and collusion, expropriation of minority shareholders and a lack of transparency. Moreover, one of the main targets of the MES reform was a further separation of the government from the management, which actually equated to increasing the separation of the principle from the agent. Arguably, such an increasing separation of government from management was in fact logically imperfect from the perspective of agency theory and could lead to increasing informational asymmetries between the management and the government. The corporate governance problem of SOEs has become even more serious because of increased managerial autonomy. The increase in managerial autonomy could lead to greater informational asymmetries between the management and the government, making it much easier for managers of SOEs to operate firms in their own interests. Lin (2001) claims that the problems of the corporate governance of SOEs are eventually attributable to continued state dominance in ownership and control of the industrial sector, and the process of corporatisation and integration has not come with any substantive change in the

very nature of ownership and control of SOEs.

The third phase of the SOE reform (1997-present) can be characterised by significant diversification of state ownership through the partial or complete privatisation of SOEs. In 1997, at the 15th congress of the CCP, President Jiang Zemin formally announced the decision on state ownership diversification through privatisation, which was intensively focused on small and medium-sized SOEs. In the meantime, he also stressed that state ownership would continue to remain dominant in the economy. The decision was reiterated at the 4th Plenum of the 15th Party Congress in September 1999 and by the State Planning and Development Commission's (SPDC) statement in January 2000, which reaffirmed that although the state would start to retreat from the Chinese economy, state ownership would continue to play a dominant role in the whole economy, particularly with regard to strategic industries, such as infrastructure and key producers goods (Lin, 2001).

There are two separate worlds of SOEs in China: small and medium-sized SOEs under the supervision of local governments and large-sized SOEs under central government. The government strategy largely involved in the process of privatisation, particularly in the 1990s, is a so-called '2-R strategy' – 'Retain' government control of large SOEs that operate in the strategic sectors and 'Retreat' from small and medium-sized SOEs that operate in highly competitive markets (Liu *et al.*, 2006). Stated simply, the '2-R strategy' can be viewed as an official policy for China's nationwide privatisation process whereby the state should retain government control of large SOEs, while retreating from small and

medium-sized SOEs. In line with this strategy the Chinese government usually chooses to corporatise its large SOEs through share issue privatisation (SIP). In essence, the SIP in China is only partial privatisation, selling only part of the existing shares on the stock market to investors (mainly domestic investors at the initial stages of the reform). Perotti (1995) argues that SIP, a commonly used method of privatisation in economies with less developed capital markets, could be more likely to be motivated by political revenue and some other non-efficiency considerations. In China, large-sized SOEs, especially those in strategic sectors, are considered by the government to be closely associated with the safety, security and stability of the national economy. The government, therefore, should never relinquish its control rights over large SOEs. Constrained by political ideology, cadres of the CCP might prefer only partially privatising large-sized SOEs to completely selling them to private parties. The partial privatisation of large-sized SOEs, which was in line with President Jiang's speech at the 15th congress of the CCP, was therefore a reflection of political considerations. The first part of the '2-R strategy' – 'Retain' government control of large SOEs that operate in the strategic sectors – has clearly demonstrated the government's ambition to remain as the controller of large SOEs. In contrast, both central and local governments have chosen to entirely or largely privatise their small and medium-sized SOEs, often through management buyouts or management-employee buyouts or as joint ventures with foreign investors. Since the implementation of the 'SOE deregulation' policy the majority of small and medium-sized SOEs have been gradually transferred to local governments at different levels. Local governments at various levels have, since then, become the real residual claimants and controllers of these SOEs. By 1985, SOEs controlled

by provincial, municipal and county governments accounted for 53 per cent of the total industrial output from all enterprises at, or above, the township level. It cannot be simply concluded that the large divestment of small and medium-sized SOEs was merely an action initiated by the central government. Rather, it was a reflection of initiatives of local governments to get rid of the burden imposed on them by the increased losses of SOEs under their jurisdiction (Cao *et al.*, 1999; Li *et al.*, 1999; Lin, 2001). As stated before, the hardened budget constraint and increased competition from the non-state sector have made SOEs less and less profitable, which has greatly changed the cost of benefits to local governments at each level for keeping SOEs. The deteriorating SOE performance was magnified under the hard budget constraint and the losses of SOEs became increasingly heavy burdens for local governments, which provided local governments with an incentive to privatise their SOEs. Hence, the Chinese pattern of SOE privatisation, which stands in contrast to those of Eastern Europe and the former Soviet Union, is a gradual and bottom-up one (i.e. initiated by local governments and then promoted by central government). As a result of the significant diversification of state ownership, starting in the late 1990s and accelerating in the early 2000s, great numbers of SOEs have been restructured, privatised and some of them or their spin-offs have been converted into PLCs. By 2007, only 20680 industrial enterprises were state-owned or majority-controlled, among which only 10074 enterprises remained entirely state-owned (Chan and Unger, 2009).

3.5. Chinese stock market

The establishment of the stock market was to facilitate the reform of the SOEs

because the government found it difficult to continue with policy lending, subsidies and preferential treatment through the ailing banking sector. The soft budget constraint had the state sector trailing far behind in productivity and profitability. The huge amount of NPLs in the banking sector could be seen as the legacy of these policies. Therefore, the Chinese stock market was expected to alleviate government fiscal burdens as well as boosting the national economy growth.

This section first discusses the remarkable emergence of the Chinese stock market. Next, I intend to describe some important laws and regulations pertaining to the stock markets, such as The Provisional Regulations on Administration of Issuing and Trading of Shares (PRAITS, 1993), the Company Law (1994), Securities Law (1999) and the Code of Corporate Governance for Listed Companies (CCGLC,2002).

3.5.1. The emergence of Chinese stock market

There are two stock exchanges in China: the Shanghai Stock Exchange (SHSE), which was established in December 1990, and Shenzhen Stock Exchange (SZSE), which opened in April 1991. The reason for establishing two stock exchanges rather than one was to stimulate competition (Xu and Wang, 1999). Given that the function of stock markets in China was mainly to support the restructuring of SOEs, the decision as to whether a company can go public or not is determined largely by an administrative process rather than a market-based process. When a firm wants to go public, it must seek permission from the local government and the relevant central government ministries. The China's Securities Regulatory

Commission (CSRC) also requires the firm to provide three years of audited accounting data prior to listing, and requires that typically at least 25 percent of all shares must be available for trading on the stock exchanges after listing.

Table 3.1 provides descriptive statistics for the Chinese stock market from 1998 to 2007. Given that the stock market provides an attractive way to raise funds, the Chinese stock market (SHSE and SZSE) has grown rapidly during the past two decades. There were 1530 publicly listed companies (PLCs) across both stock exchanges at the end of 2007, with total market capitalisation of 32714.1 billion CNY.

Table 3. 1 Market statistics of Chinese stock market from 1998 to 2011

Panel A														
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Number of Listed Companies (A share)	825	922	1060	1140	1213	1277	1363	1358	1411	1527	1602	1696	2051	2320
Amount Issued (Million)	220397	275788	343960	465045	528365	580832	650582	693608	1244565	1674662	1862978	2033277	2670152	2944860
Market Capitalization(Million RMB)	1929930	2616763	4745575	4224556	3752656	4152050	1529582	3181055	8811396	32458773	12056655	24212701	26322054	21330984
Negotiable Market Capitalization(Million RMB)	555002	793746	1552421	1334489	1171875	1230594	1099865	1002843	2373126	9052651	4441910	14945597	19091710	16347906
Panel B														
Number of Listed Companies (B share)	106	108	114	112	111	111	110	109	109	109	109	108	108	108
Amount Issued (Million)	14138.4	15096.9	17378.7	18790.2	17934.6	18962	20890.9	22746.4	23834.4	25383.28	27034.77	27348.85	28296.63	29651.83
Market Capitalization(Million RMB)	20635.6	30354.6	63519.5	127665	80256.9	93723.4	74622.1	61973.2	128993	255315	79988.06	181210.8	220204.9	144825.6
Negotiable Market Capitalization(Million RMB)	19558.4	27650.1	56331.2	111828	76580.6	87260.1	69017.3	60208	127238	253783.2	79479.6	180268.5	219331.1	144223.6

Source: China Securities and Futures Statistical Yearbook, 2012.

3.5.2. Share classifications

The Chinese stock market classifies owners of shares into five groups[14]: state, legal-person (LP), employee, tradable A-shares and offshore shares (e.g. H-shares, N-shares and B-shares), all providing equal voting rights (Tian and Estrin, 2008). This official classification is, however, somewhat misleading, since it neither clarifies the nature of owners nor traces the ultimate owners. For instance, by pyramid or cross-shareholdings, foreign investors have already obtained a big portion of A-shares which are designed exclusively for domestic investors, while an increasing number of domestic investors are now offshore shareholders.

State Ownership: The state ownership can be divided into two portions: the immediate ownership, namely the state shares that are directly obtained by the government institutions or departments, and indirect ownership, which is the legal-person shares held by state-owned legal-persons (Wei, 2007). A number of empirical studies have found immediate state ownership to be negatively correlated with performance. Qi *et al* (2000) studied PLCs listed on the Shanghai Stock Market for the period 1991-1996 and also found that the direct state shareholdings had a negative impact on listed firm performance. Similar results were reported by Chen (2001), Wei (2007) and Xu and Wang (1999). The findings of the empirical studies reviewed above suggest that state shareholdings have a negative effect on SOEs. Hence, a quick response to the findings would be for the state to further divest its shareholdings.

---

[14] In general, state and legal-person shares are non-tradable and only under some specific circumstances can they be exchanged. Starting from 2005, China's split-share reform/share segmentation reform is currently underway to make all shares tradable.

Legal-person shares: In China, Legal Persons (LPs) are 'technically' autonomously managed legal entities, most of which are also primarily state-owned government agencies (Hovey and Naughton, 2007). Thus, LP holdings can be classified as shares held indirectly by the state through various holding entities and the others obtained by non-state legal entities. LP holdings have been analysed in a number of empirical studies and are generally found to have a positive influence on firm performance. For example, Sun and Tong (2003) found that LP ownership would positively affect listed firm performance. Xu and Wang (1999) also found a similar positive relationship. Gul (1999) found a stronger correlation for firms with LP dominance than for state dominance. Therefore, it appears that under the present circumstances, LP ownership has both the ability and the incentive to provide necessary and efficient monitoring which results in improved performance of listed firms in China (Hovey and Naughton 2007).

Tradable A-shares: These shares are principally issued to Chinese domestic investors traded in CNY on the Shanghai Stock Exchange and the Shenzhen Stock Exchange. Shareholders of tradable A-shares are indeed the supermajority power in the market. The majority of empirical studies with regard to tradable A-shares reveal that the greater the proportion of tradable A-shares, the higher the performance of the firm. For example, Hovey (2005) found a positive relationship between tradable A-shares and firm performance, though the relationship is not as strong as would be expected. However, according to conventional theory, tradable A-shares would have little explanatory power on corporate performance, largely due to the pursuit of short-term interests and lack of incentives to actively

monitor management. Xu and Wang (1999) did not find a positive relationship between tradable A-shares and corporate performance and thus suggested that the free-rider problem might exist.

Employee shares: These shares are offered to employees of a listed company, usually at a substantially discounted price. These share offerings are designed as an incentive scheme to employees and are thus expected to have a positive effect on corporate performance. Employee shares are normally subject to a lock-up period before they become tradable on the market, and usually the period is of 6 to 12 months, according to the relevant policy stipulated by the CSRC. For example, Bank of Ningbo (Stock Code: 002142) launched its Initial Public offering (IPO) in July 2007, but its employees had to wait for 12 months before the CSRC lifted the ban on their shares.

Offshore shares (foreign ownership): These shares are B-shares, plus cross-listings in Hong Kong (H-shares), New York (N-shares) and other foreign exchanges. According to findings by (Coffee, 2002; Lang *et al.*, 2003; Moffett *et al.*, 2003), it is expected that firms that are cross-listed on foreign stock exchanges would have superior performance due to improved disclosure and monitoring, and ultimately enhanced value. The B-share market was opened up for trading by domestic individual investors in February 2001, as long as funds used for trading are from offshore accounts (Hovey and Naughton 2007), which might be seen as the first step towards amalgamation of the B-shares market with the A-shares market. As one of the objectives of the Chinese stock market is to

attract international capital, the integration of them may be able to create a more efficient and better performing market that produces good returns, reduces variability and risk and attracts more international players.

In December 2002, qualified foreign institutional investors (QFII) were formally granted a permit by the Chinese government to invest in the A-shares market. The permit is aimed at substantial, established institutions, as foreign institutions are required to have at least 10 billion USD under management or be a top 100 financial institution. They are required to be fully committed to the market, thus entry and funds repatriation conditions are restricted. Before December 2002, in A-shares market, foreign ownership mainly took the form of a major co-operator in joint-stock companies, like General Motor (Shanghai) Ltd., Honda (Guangzhou) Ltd. and Shenzhen Development Bank Ltd., etc. Foreign ownership has been an important player in China's A-shares market up to the present time and is on average said to have a positive influence on the performance of PLCs in China (Hovey and Naughton 2007). Indeed, conventional theory would hold that foreign institutional holders would tend to monitor firms they invest in more closely and thus performance should improve. In addition, they select only these firms that have excellent records and potential (Chung *et al.*, 2002; Sarkar and Sarkar, 2000). To summarise, many empirical findings support the notion that foreign ownership on average leads to prominent performance of PLCs in China and has the potential to strengthen the market. Hence, it should be encouraged in China.

3.6. Corporate governance of Chinese PLCs

As the world's second largest economy and the largest transition economy, China has recently become the focus of corporate governance. Over the past three decades, the Chinese government has done much to improve the corporate governance of Chinese industrial enterprises, such as the injection of two stock exchanges in the early 1990s, the enactment of a series of relative laws and regulations and the establishment of the CSRC. As a result, substantial progress in the quality of corporate governance practices has been observed for a number of PLCs. However, China's current corporate governance has been found to still be unpleasant and far from perfect by many recent empirical studies. For, example, Cheung *et al* (2008) develop a corporate governance index (CGI) to measure the overall quality of corporate governance practices of the largest 100 PLCs in China and their test results show that the CGI of Chinese PLCs tends to be loosely connected with market valuation. Arguably, their empirical results suggest that it seems impossible for Chinese PLCs to enhance their market valuation through the improvement of their corporate governance practices. It might be imperative for PLCs to further improve the effectiveness of their corporate governance mechanisms.

Despite the variety of definitions of corporate governance, extant literature generally divides corporate governance into two categories: internal and external corporate governance. The remainder of this section will present a brief discussion of both internal and external corporate governance arrangements in China, especially for Chinese PLCs.

Internal corporate governance is primarily comprised of the ownership structure, board of directors and executive compensation. In the current Chinese legal environment the existence of highly concentrated ownership, especially one ultimate controller, is pervasive among Chinese PLCs. Recent empirical works have found that the median of the largest shareholder's shareholding is around 40 per cent, while the median of the second largest shareholder's shareholding is only around 5 per cent (see, Bai *et al.*, 2004; Chen *et al.*, 2009). Moreover, more than 80 per cent of PLCs are directly or indirectly controlled by the state (Liu and Sun, 2005; Li, 2008). There is no doubt that the state is currently both the regulatory authority (judge) and the controlling shareholder (player) in most listed firms. Arguably, such a dual role could give the state a strong incentive to regulate the market in its own favour so as to further its interests as the controlling shareholder. The major responsibility of the board of directors is to minimise agency costs induced by the separation of ownership and control in modern companies (Fama and Jensen, 1983a). However, as in other East Asian countries, controlling shareholders of Chinese PLCs are tempted to control the board of directors and management in order to make sure that the firm is operated in their best interests (Chen *et al.*, 2002). Moreover, controlling shareholders often see a board they can control as a tool to extract extra private profits, sometimes even at the cost of the minority shareholders.

There is a consensus in the literature that independent directors can be an effective mechanism in enhancing firms' corporate governance (Weisbach, 1988; Kato and Long, 2006; Fan *et al.*, 2007). Unlike insider directors, independent

directors are less influenced by controlling shareholders and are responsible for maximising all shareholders' wealth rather than the wealth of the controlling shareholders only. To improve the level of PLCs' corporate governance and better protect the interests of minority shareholders, the CSRC issued 'Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies' in 2001. The guidelines required that all PLCs should have at least one third independent directors on their boards by 30th June, 2003.

Another major issue of internal corporate governance is managerial compensation. Normally, the compensation of senior management teams come in four forms in developed economies: salary, bonus, perquisites and stock-based incentives (Li *et al.*, 2008). In China, before the economic reform began in 1978, all SOE managers were civil cadres who acted as state representatives and were paid in accordance with their rank in a highly structured payment scale system. Arguably, managers' incomes were not associated with corporate financial performance. In other words, there was a lack of an incentive system at that time to motivate managers to improve firms' financial performance. Since the early 1990s, many managerial incentive schemes have been introduced to SOEs. Firth *et al* (2006b) suggest that the most popular managerial incentive scheme is comprised of two components: salary and performance-based bonus. However, Li *et al* (2008) point out that the performance-based bonus is not very flexible in practice because the method of bonus payment has not been clearly defined. Moreover, in spite of many recently introduced managerial incentive motivated reward schemes, it should be noted that very few PLCs, especially those controlled by the state, have

executive stock option schemes.

Besides the internal corporate governance mechanisms, external corporate governance is the other important aspect of corporate governance system and it mainly consists of the market for corporate control, bank monitoring and the legal system. In Western countries, companies with unsatisfactory corporate performance are often punished or disciplined by the market. Bai *et al* (2004) suggest that an active market of corporate control is efficient in allocating resources for firms. Although an active market of corporate control has been considered as an effective external corporate governance mechanism in developed economies, such a market in China, up to the present times, has not been in place. One major reason might be that block shareholdings are often state or legal-person shares. All state and legal-person shares were non-tradable before the split-share reform[15] began in 2005 and could only be transferred under the permit of the CSRC. Perhaps a more active market for corporate control might be expected to emerge and start to have a positive impact on corporate governance in China as a result of the split-share reform of 2005.

According to the existing literature, debt issuance is an important external corporate governance mechanism in helping to reduce conflicts of interest between management and shareholders (Smith and Warner, 1979; Jensen, 1986).

---

[15] There are five types of shares in China: state, legal-person (LP), employee, tradable A-shares and offshore shares. Under the split-share system, in general, state and LP shares are non-tradable shares while the other three types are tradable shares. The aim of the split-share reform of 2005 was to make all non-tradable shares tradable in the market.

Gilson (1990) suggests that creditors can take over the role of shareholders in disciplining the management when firms are under financial stress. Arguably, borrowings from banks could be more effective than any other forms of public debt in reducing problems associated with agency conflicts and informational asymmetries (Diamond, 1984; Berlin and Loeys, 1988). This is primarily due to the comparative advantage of banks in monitoring firms' activities and in collecting and processing information, in order to ensure the safety of their issued loans. In China, due to the lack of a functioning corporate bond market, banks, especially the state-owned banks, are still the main loan providers. Bank loans are an important financing source which constitutes more than 20 per cent of total assets in most PLCs. It is worth noting that more than 80 per cent of total bank loans are provided by the 'Big Four' banks. There is no doubt that the banking sector has played an important role in the corporate governance of Chinese PLCs. Li *et al* (2008) point out that, far from being a model similar to the role the banking sector plays in Japan or Germany, where banks are actively involved in monitoring firms' operations, the Chinese banking sector is reluctant to directly get involved in firm's corporate governance. It is worth noting that the soft budget constraint in China is the key obstacle preventing banks from conducting regular monitoring of PLCs, since the government is both creditor and debtor in state-controlled PLCs (Tian and Estrin, 2007).

The role played by the legal framework and the legal foundation in disciplining management and preventing controlling shareholders from expropriating minority shareholders has been extensively documented in the literature (La Porta *et al.*,

1997, 1998, 1999, 2000b). It could be argued that the government can improve corporate governance by strengthening a legal system that protects shareholders' interests and enhancing the enforcement of laws and regulations. Since the early 1990s, in order to improve the legal environment of the Chinese stock market a number of relevant laws and regulations have been enacted and introduced, such as the Provisional Regulations on Administration of Issuing and Trading of Shares (PRAITS, 1993), the Company Law (1994), the Securities Law (1999) and the Corporate Governance Guidelines for Listed Companies (CGGLC, 2001). Indeed, these laws and regulations have greatly improved the legal infrastructure of China. However, despite the recent progress China has made, the Chinese stock market is still being criticised for its unsatisfactory legal framework and a lack of effective law enforcement. Yang *et al* (2011) argue that a sound legal system would never materialise without a truly independent judicial system, and in the current market condition the government is both the market regulator and a participant.

To summarise, in spite of the great progress China has made in corporate governance in the past two decades, there is still plenty of room for further improvement. It is worth noting that many traditional corporate governance mechanisms that are widely used in developed economies to reduce agency problems might not be applicable in the Chinese markets under the current circumstances, such as the market of corporate control, banking monitoring and managerial stock-based incentives. Yang *et al* (2011) impute such a situation to three key problems of Chinese markets: (1) the dominance of state ownership in

PLCs; (2) strong political interference on PLCs; (3) nonexistence of a truly independent judicial system. Li *et al* (2008) suggest that the dysfunction of the board of directors and other relevant committees could also be a key reason.

3.7. Regional differences in China

Substantial disparity across regions is a reality in almost every geographically large country. China covers 9.6 million square kilometres, and its vast land area is inevitably associated with enormous contrasts in conditions, both natural and artificial, across 32 provincial regions. It is argued that economic as well as political factors are the main driving force of such significant regional differences in China. Moreover, the regional disparity may transfer (often indirectly) the influence of these factors to listed companies, affecting and shaping their corporate governance in many ways (e.g. access to external finance, investment opportunities and tax advantages). Hence, this section discusses the influence that regional disparity may have on the corporate governance of listed companies in China from both economic and legal perspectives.

To elaborate the role economic factors play in regionalism, it might be useful to review an important claim of the development literature. It has long been argued that countries pursuing externally oriented development strategies are more likely to achieve higher rates of economic growth than those that are internally focused (Lee, 1994). If China's 32 provincial regions are seen as independent economies to each other, this argument can, to a large extent, explain the substantial economic disparity across regions in China. The degree of economic development

(in terms of per capita national income) differs substantially among regions, with trade and investment being highly biased towards the rich Eastern regions. It is worth noting that such uneven development is politically encouraged in China, as authorities believe it could be wise to allow some regions to develop much faster to raise sufficient funds to help other comparatively backwards regions, ultimately improving the whole national income. Obviously, Eastern regions were the best candidates in this sense, and government policy and domestic resources has been largely altered towards the East, particularly in the early stages of the economic reform.

The political effect is a series of 'preferential policies' that heavily favour the Eastern provinces or metropolises, as concluded by Fan (1997). He argued that at least six 'preferential policies' could be identified. The 'preferential policies' extended to the coastal regions are in essence policies to marketize and international these Eastern areas. Arguably, firms in these open economic zones could import intermediate inputs duty-free to produce exports; collaborate with foreign companies in investment, manufacturing and distribution; hire and fire workers in accordance with their performance and demand conditions; and escape the confiscatory taxation that is needed in a centrally planned economy to finance its vast, complicated system of social subsidies (Demurger *et al.*, 2002).

It can be often observed that the political and economic effects work together to build up the regional inequality in China. It could be argued that the uneven development caused mainly by economic and political factors, plus geographical

advantage of the Eastern regions (being close to the sea) makes them stand out as the most advanced areas in China, which could be manifested in a number of ways: to name but three, higher GDP per capita, relatively mature industry market and more domestic and foreign investments. For example, the statistics of geographical distribution of foreign direct investment (FDI) from 1989 to 1998 could be a good manifestation of the results of the uneven development. Eastern regions in total received 88% of total FDI over that 10 years period, while central regions and Western regions were in receipt of merely 9% and 3% respectively. These economic differences could be expected to significantly affect corporate governance. First, rich regions could enable firms to have access to less costly external finance. Second, a mature industry market may provide market competition to firms, effectively reducing agency conflicts by disciplining the management. Third, domestic and foreign investments are concentrated in Eastern regions, bringing in both financing opportunities and market competition. The three above-mentioned effects on firms point to two important issues in corporate governance: the firm's cash holding policy and product market competition, with both having vast literature in their own right.

Overall, extra caution should be taken in the interpretation of regional differences on corporate governance of listed firms in China, and this is due to the fact that listed firms are always large firms and have nationwide operations. Although their headquarters are located in one region, their local branches may spread across the whole country.

3.8. Conclusion

The recognition of the enormous inefficiencies of SOEs in China has led to the post-1978 economic reform. Gains could be expected, as the Chinese government has adopted various privatisation projects to gradually replace state control with private control by outside investors (Megginson *et al.*, 1994). The economic reform has been considered beneficial to the national economy and is seen as a landmark in the development of corporate governance in China. Despite recent improvements China has achieved in the area of corporate governance, there is still huge scope for further improvements. The current corporate governance system of PLCs is severely hampered by a number of problems, such as the huge block holdings by the state, excessive government intervention and a lack of an independent judicial system (Li *et al.*, 2008; Yang *et al.*, 2011). It is worth noting that in the Chinese corporate governance system, problems, especially those associated with the relatively lower inefficiency of state ownership, should be carefully resolved in the future as a matter of top priority. MacNeil (2002) examines the emergence of the legal system of PLCs in China and finds that China falls into the investor-unfriendly category. However, it should be emphasised that corporate governance in China is still in the process of development.

The government is continuing its efforts to search for a sound corporate governance system, as evidenced by many of its recent actions, such as the introduction of a system of independent directors in 2001, the launch of the split-

share reform in 2005 and the revision of the Company Law in 2006[16]. In order to enhance the monitoring and disciplining function of the board of directors for all listed companies in China, in 2001 the CSRC introduced the 'Guideline for introducing Independent Directors to The Board of Directors of Listed Companies'. The Guideline requires that independent directors should make up at least one third of directors sitting on the board in any listed company by 30th June, 2003. Moreover, the appointed independent directors are required to comment on managerial performance in the company's annual reports. The core theme of the Guideline is to ensure an increase in the proportion of independent directors sitting on the board who can serve as a check on both management and the board in the interests of all shareholders.

On the 27th October 2005, the 18th Secession of the Standing Committee of the 10th National people's congress (NPC) passed the revised Company Law of the People's Republic of China, which was promulgated in order to replace the old Company Law enacted in 1994. The revised Company Law has made a number of important changes to China's corporate governance system. Particularly, it introduces several measures to enhance managerial accountability, and those measures include board composition, the role and responsibilities of directors, the role of major shareholders and shareholder remedies. First, the revised Company Law reforms rules with respect to board composition by enhancing the power and functions of outsider directors. Second, it introduces a whole new chapter to

[16] The government has not announced any major new laws in this area since then.

reinforce the general framework of directors' duties, as well as establishing a special regime regarding related party transactions. Third, as an effort to protect the interests of minority shareholders, it requires that shareholders should not abuse their voting powers, and permits the company to apply a cumulative voting system which is intended to secure some power or influence for minority shareholders in board elections,. Finally, it enhances corporate governance in China by substantially strengthening the shareholder remedy regime. As discussed above, the revision of the old Company Law in 2005 has greatly improved the previous system which has been proved out-of-date and inadequate. Indeed, this revision has made many important changes (breakthroughs and innovations) to the corporate governance system, which has thus been considered to be a revolutionary reform in this area.

The Chinese stock market classifies owners of shares into five groups: state shares, legal-person shares, tradable A-shares, employee shares and offshore shares, all having equal voting rights (one-vote-one-share). Among all types of shares, state shares, legal-person shares and tradable A-shares each comprises around one third of the total outstanding shares, with the other types as a whole representing less than 10 percent of total outstanding shares. Under the split-share system, in general, state and legal-person shares are non-tradable shares while the other three types are tradable shares. Non-tradable shares entitle holders to have as exactly same voting and cash-flow rights as holders of tradable shares, but they cannot be publicly traded in the market. The non-Tradable shares represent a major obstacle to the development of China's domestic financial market due to

their negative effects on market liquidity and financial transparency. In January 2004, the Chinese government officially admitted problems caused by the non-tradable shares and stated that necessary reforms in this area would be launched in the immediate future. In 2005, the CSRC officially launched a structural reform program, called the split-share reform, whose ultimate aim was to make all non-tradable shares tradable in the market.

CHAPTER FOUR
THE ULTIMATE CONTROLLER AND CORPORATE PERFORMANCE

4.1. Introduction

China's economy has experienced rapid growth over the past thirty years and has witnessed a significant transformation of all sectors. A large number of former state owned enterprises (SOEs) have been reorganised and some of them or their profitable operating arms have been privatised and then listed on the two stock exchanges in China in order to further China's economic reform (Chen *et al.*, 2006). The two stock exchanges are the Shanghai Stock Exchange (SHSE), established in December 1990, and the Shenzhen Stock Exchange (SZSE), launched in April 1991. Up to the present day there have been around 1700 publicly listed companies (PLCs) in China and as far as my study is concerned, there were 1530 PLCs (including around 1300 A-shares PLCs) by the end of 2007.

The Chinese stock market has been developing fairly rapidly since its establishment. It grew to become the third largest in the world by the end of 2007 and is expected to surpass the US stock market and become the largest stock market in the world by 2020. Despite a multitude of successes in many ways, the profitability of PLCs has been disappointing on the whole (Chen *et al.*, 2009),

leading to mounting concerns with regards to PLCs' competiveness, sustainability and financial performance, etc.

The ownership structure of PLCs in China has two distinct features. The first one is that PLCs always have a dominant shareholder whose shareholding far exceeds other shareholders (Hovey and Naughton, 2007). The second feature is that the state retains a significant ownership stake and acts as the ultimate controlling shareholder in most PLCs (Clarke, 2003). Due to the large involvement of the Chinese government in the economy and the gradual privatisation strategy adopted in China's economic reform process, more than 80% of PLCs remain directly or indirectly controlled by the state. Two such distinct features, along with an increasingly important role of the Chinese securities market in China, the second largest world economy, have made China the best lab for research on corporate governance among all emerging markets and have stimulated increasing interest in Chinese PLCs from both academics and practitioners within and outside China. Accordingly, these interests are nested in two major areas. The first one (see, for example, Chen *et al.*, 2009) is focused on investigating the corporate governance and its development in China, and particular regards have been paid to issues of relative efficiency between state and non-state shareholdings. The other one (e.g. Clarke, 2003; Hovey and Naughton, 2007) is intent on discovering an optimal level of state ownership in those PLCs as well as finding some feasible routines to further divest state ownership, since in the 16th National People's Congress in 2002 the Chinese government announced its intention to deepen the economic reform by continuing reduction in state

ownership in the whole economy so as to attract more investors to accelerate its economic growth, as long as the state could still retain control of the economy. This announcement symbolised the economic policy shift of the Chinese government from 'dominating' the economy to 'controlling' the economy.

It is worth noting that the present ownership structure in Chinese PLCs gives birth to two types of agency problems. The first one is the 'classic' agency conflicts between shareholders and management. The second is the 'new' agency conflicts between controlling and minority shareholders. Given China's weak legal environment and the weakness of the government as the ultimate controller in realising the maximum value for all shareholders, the latter type of agency problem may be more prevalent and complicated in China. The excessive involvement of government in the economy probably makes these two agency problems co-exist in most Chinese PLCs. However, current corporate governance practices mainly target the first one, while practices related to the second one are rare. Even among those few works aimed at addressing the second problem, their misclassification of the ultimate controller automatically renders their results invalid, with Chen *et al* (2009) being the only exception.

Chen *et al* (2009) argue that there are two types of misclassification in the existing literature. The first one mistakes the legal share-types for the types of the ultimate controller, which is rather misleading because the share-types[17] neither

[17] The Chinese stock market classifies owners of shares into five groups: state shares, legal-person shares, tradable A-shares, employee shares and offshore shares (such as H-shares, N-shares and B-

clarify the nature of the owners nor trace the ultimate owners. From the theoretical perspective of agency theory, it is necessary to first identify the owner (principal) and the manager (agent) in order to clearly define their rights and responsibilities. However, the first type of misclassification fails to live up to this requirement. The second type of misclassification is in treating all state shareholdings as only one group, which completely ignores the fact that these dominant state shareholdings are scattered amongst a variety of state agencies that are supposed to have different motivations and incentives. Thus, treating all these state agencies as only one type (i.e. the state) may obscure the real relations between a PLC's performance and ownership structure and could lead to erroneous conclusions. Hence, Chen *et al* (2009) trace the ultimate controller for each firm-year observation and argue that it is imperative to classify the ultimate controllers into four major types based on their political and economic interests: state asset management bureaus (SAMBs), state-owned enterprises affiliated to the central government (SOECGs), state-owned enterprises affiliated to the local government (SOELGs) and private investors.

Chen *et al*'s (2009) work was really a milestone in Chinese corporate governance research but there is still a flaw in their classification, which treats the state asset management bureaus at the central level (SAMBCG) and state asset management

---

shares), all having equal voting rights (one-vote-one-share). Among all types of shares, state shares, legal-person shares and tradable A-shares each comprises around one third of the total outstanding shares, with the other types as a whole representing less than 10 percent of total outstanding shares. China Securities Regulation Commission (CSRC) launched the split-share reform in 2005, with its ultimate goal of allowing all PLCs' shares to be tradable on the market.

bureaus at the local level (SAMBLG) as one group. Although they are all SAMBs under the State-owned Assets Supervision and Administration Commission of the State Council (SASAC), their incentives and motivations are not necessarily the same. It is worth noting that the SAMBs operating at the central level and their local counterparts differ as the ultimate controller in PLCs in three aspects largely determined by their operation levels: level of monitoring, staff quality and relation with the government, and it might be more appropriate to further divide the SAMBs based upon their operation levels.

I find that PLCs whose ultimate controller is private investors outperform those controlled by the state, if all state agencies are seen as one group, whereas it is worth noting that of all four types of state agencies, SAMBCG or SOECG controlled PLCs perform almost equally as well as their privately controlled rivals. It is the underperformance of PLCs controlled by SAMBLGs or SOELGs that has dragged down the overall state performance. As to the ownership concentration, I find an 'M' shaped relation between the ultimate controller's shareholding and corporate performance, suggesting two possible optimal ownership concentration levels. Authorities in China have had the objective of gradually decreasing state holdings in the economy (Hovey and Naughton, 2007), and in this sense, this chapter could be seen as a suggestive guide to China's further economic reforms.

The rest of this chapter is organised as follows: Section 4.2 provides information with respect to theoretical issues, discusses motivations behind different ultimate

controllers of Chinese PLCs and proposes testable predictions. Section 4.3 explains the research design, section 4.4 gives examples to demonstrate how two types of misclassification adopted in previous works could lead to misleading results and then reports empirical results based upon the precise classification, and Section 4.5 concludes the study.

4.2. Background and hypotheses

4.2.1. Ownership concentration and corporate performance

Jensen and Meckling (1976) introduce the 'classic' agency theory based on their findings that in a widely held company the potential agency conflict could arise from the separation of control and ownership, as the manager who holds substantial residual control rights may not always behave in the owners' interests. Subsequent research aimed at reducing this agency conflict between manager and shareholders has come up with a bundle of possible solutions, such as incentive contracts (Jensen and Murphy, 1990), debt issuance (Smith and Warner, 1979), market for corporate control (Jensen and Ruback, 1983), board of directors (Fama and Jensen (1983a) and large shareholders (Shleifer and Vishny, 1986).

The 'classic' agency theory strongly influenced corporate governance research for two decades. However, La Porta *et al* (1999) argue that the most pervasive agency conflict stems from the expropriation of the minority shareholders by large shareholders. Their argument is based upon their findings that concentrated ownership is a common global phenomenon, particularly in countries with weak shareholder protection. Holderness and Sheehan's (1988a, b) findings are

supportive of La Porta *et al*'s (1999) claim, as even in the US, which is considered a country with an excellent legal system to ensure shareholders' rights, hundreds of public companies are found to have a controlling shareholder.

Among the aforementioned five possible mechanisms to reduce the classic agency problem, the presence of large shareholders is thought of as the most direct way. Shleifer and Vishny (1986) argue that the presence of large shareholders could provide a partial solution to the free-rider problem, hence reducing the agency costs caused by the classic agency problem. In a stark contrast to the minority shareholders, large shareholders are believed to have both the ability and incentive to closely monitor management and oust the managers through a proxy fight or an internal management shakeup if necessary (Shleifer and Vishny, 1986; Frank and Mayer, 2001).

Concentrated ownership acts as a shield to protect shareholders from expropriation by managers, but it does not come without a price. In spite of the positive role of large shareholders, a large body of literature has also documented a series of agency problems rooted in the existence of large shareholders. Shleifer and Vishny (1997) claim that large shareholders are more likely to use their control rights to generate private benefits through expropriation of minority shareholders. La Porta *et al* (2002b) echo Shleifer and Vishny's (1997) claim by analysing then testing a model of the effects of legal protection of minority shareholders and of cash flow ownership by a controlling shareholder on the valuation of firms. The expropriation of minority shareholders would probably

reduce a firm's valuation, and such value discounts could be evidence of the manifestation of the scale of expropriation that the minority shareholders are subject to. Large shareholders could make private benefits in a variety of ways, such as paying extra perks to managers, granting related loans and guarantees, undertaking related transactions and investing in unprofitable projects. Johson *et al* (2000) use the word 'tunneling' to describe this agency conflict. 'Tunneling' means the transfer of assets and profits out of a firm (through an underground tunnel) for the controllers' private benefits at a cost to minority shareholders. Claessens *et al* (2002) suggest that, given that concentrated ownership is predominant in most countries, the agency conflicts between the large shareholders and minority shareholders are much severer than those between managers and shareholders.

In essence, the key incentive of large shareholders to expropriate minority shareholders lies at the divergence of the cash-flow rights and control rights. In a modern firm there is always a separation between control and ownership of a controlling shareholder to some extent, particularly through the pyramidal holding structure or cross-shareholdings. The control (i.e. voting rights) is referred to as a shareholder's ability to elect the board of directors and intervene in the firm's affairs, while the ownership (i.e. cash flow rights) provides the shareholder with the rights to make claims on cash payouts and dividends. If a controlling shareholder owns a firm through the pyramidal structure or cross-shareholdings, it is likely that the controlling shareholder's voting rights are greater than his cash flow rights. The large shareholders would probably extract

private benefits out of firms, once their control rights stay well in excess of cash-flow rights and the consequent benefits exceed the loss that expropriation might induce. Shleifer and Vishny (1997, p.759) conclude that, "as ownership gets beyond a certain point, the large owners gain nearly full control and are wealthy enough to prefer to use firms to generate private benefits of control that are not shared by minority shareholders". Though the China Securities Regulation Commission (CSRC) stipulates the one-share-one-vote policy for all PLCs in China, deviations from this policy could still be achieved through cross-holdings and/or pyramidal structures. Claessens *et al* (2000) examined the separation of ownership and control for 2,980 firms in nine East Asian countries and conclude that on one hand, controlling shareholders make the control rights exceed cash flow rights via cross-holdings and pyramidal structures, and, on the other hand, they assign insider members to sit on the board to enhance their control.

In summary, the relationship between a firm's value and the largest shareholders is complex and Bai *et al* (2004) suggest that increasing ownership concentration from a low level may help address the free-rider problem. However, further increase in ownership concentration could lead to the 'tunneling' problem, namely the 'entrenchment' effects. Finally, as the ownership concentration approaches 100 percent, the 'alignment' effects start to work again to remove the 'tunneling' problem. Chen *et al* (2007) suggest that the relationship between firm performance and ownership concentration is largely determined by the tradeoff of the 'entrenchment' effects and the 'alignment' effects. To examine this relationship, researchers have conducted a vast number of studies on China's

PLCs, but the results are inconclusive, indicating a positive relation (Xu and Wang, 1999), an inverse U-shaped relation (Sun and Huang, 1999), and a U-shaped relation between firm performance and ownership concentration (Bai *et al.,* 2004). Based upon the above discussion, I therefore make the first prediction in order to find an exact relationship between PLCs' performance and the largest shareholder:

Hypothesis 1: The largest shareholder's ownership has a U-shaped relation with a PLC's valuation, that is, the ownership appears to show 'entrenchment' effects at a low level of concentration, but the 'alignment' effects will take over when ownership concentration approaches 100 per cent.

4.2.2. Ownership identity and corporate performance

In addition to the relationship between the largest shareholder's ownership concentration and firms' performance, it pays to examine the relationship between another vital aspect of the largest shareholder (i.e. its identity) and a PLC's performance. I especially intend to theoretically discuss and then empirically examine whether and how different motivations and incentive structures are related to the control rights they hold. Chen *et al* (2007, p.129) claim that, "in Chinese capital market, not only the ownership of the largest shareholder determines principal-agent problems, but also the characters of the largest shareholders have important effects on principal-agent problems and the effectiveness of corporate governance". The heterogeneous characters not only provide the largest shareholders with different incentives and abilities to maximise a firm's value, but also provide them with different incentives and

abilities to abuse a firm's resources to expropriate minority shareholders.

Following Chen *et al's* milestone work in 2009, I divide Chinese PLCs into five groups according to the type of the ultimate controller. They are the state asset management bureau at the central level (SAMBCG), state asset management bureaus at the local level (SAMBLG), SOEs affiliated to the central government (SOECG), SOEs affiliated to the local government (SOELG) and private investors.

4.2.2.1. SAMBCG vs. SAMBLGs

SAMBs are one major group of state controlling agents in China and are under the supervision of the SASAC. The SAMBs operate at the central and local levels, i.e. SAMBCGs and SAMBLGs. The SAMBCGs report to the SASAC at the central level (SASAC's headquarters, SASACCG), while SAMBLGs report to the SASAC at the local level (SASACLGs). The SASAC, whose headquarters is located in China's capital, Beijing, has local branches in all provinces and municipalities. The SASAC headquarters is responsible for overseeing the state-owned asset directly controlled by the central government, while its local branches are responsible for managing state-owned assets of local governments. SAMBs usually take different names in different regions, such as 'State-owned Assets Administrative Office', 'Municipal State-owned Assets Administrative Bureau', 'Administrative Bureau of the State Property' and 'Municipal State-owned Assets Management Bureau', etc. Unlike SOEs, SAMBs are more like government institutions/offices and usually oversee and manage state shares or

sometimes legal-person shares in PLCs and many unlisted SOEs. Theoretically, SAMBCGs and SAMBLGs can invest in any companies or projects in China. However, it is often the case that an SAMBLG's operating boundary is the same as the administrative boundary of the local government whose assets it looks after. In contrast, SAMBCGs do not have such restrictions.

In the rest of this thesis, I will use the SAMBCG to represent all SAMBs under the direct supervision of the SASACCG, and SAMBLGs to represent the rest of the SAMBs under the supervision of different local SASACs. I use the SAMBCG instead of SAMBCGs to stress that all SAMBCGs can theoretically be seen as a number of administrative offices of the SASACCG, and use SAMBLGs to stress that they are under the supervision of different SASACLGs.

It is worth noting that every state agent has a twofold face or identity. They are the ultimate controllers (principals) for the controlled PLCs, but they can also be viewed as the managers (agents) of the citizens who are literally the true owners of all state-owned enterprises in China. As for SAMBs, the performance of their controlled PLCs is closely related to their twofold identities. Although the SAMBCG and SAMBLGs follow exactly the same operation guidelines, three possible reasons may cause them to differ according to agency theory. Firstly, if SAMBs are seen as the state agents, the extent of the monitoring level to which SAMBCG and SAMBLGs are exposed is closely tied to the economic and strategic importance of the firms they oversee. In this sense, SAMBCG definitely receives a comparatively higher monitoring level than SAMBLGs. Agency theory

suggests that effective monitoring could constrain the agents and force them to run firms in the interests of the owners. Secondly, if viewed as the owners of the controlled PLCs, SAMBCG is much better staffed than SAMBLGs. The expertise of the staff really does matter when SAMBs have to supervise a number of PLCs as well as unlisted SOEs in a wide range of industries. The SAMBCG has attracted the very best people from different industries or research institutions to work for it, and is intellectually backed by its consultants, the majority of whom are academics. Thirdly, SAMBLGs as the owners are more likely to abuse corporate resources in order to achieve non-profit-maximisation objectives set out by local governments. Most SAMBLGs are former local government finance offices and used to be supervised by local governments. Although these former local finance offices have been reconstructed and placed under the supervision of local SASACs, their ties with local government are still closely connected. Decisions as to remuneration or promotion of cadres of SAMBLGs are still at least partially bound up with the local governments. It could be highly possible for these cadres to abuse their 'cheap voting rights' to meet the local social objectives requested by the local governments in order to help them climb up the career ladder. Such objectives may distract the SAMBLGs from the profit-maximisation goals, resulting in lower corporate performance of the controlled PLCs according to agency theory. To summarise, the SAMBCG is assumed to be theoretically more efficient than SAMBLGs.

4.2.2.2. SOECGs vs. SOELGs

State-owned enterprises (SOEs) are assumed to operate purely on the premise of

profit-maximisation and receive dividends from their investments. Moreover, an SOE as the ultimate controller typically has expertise in the controlled PLC's industry, especially if the PLC is a spin-off from the SOE (Chen *et al.*, 2006).

SOEs could be further divided into those that are affiliated to the central government (SOECG) and those affiliated to the local governments (SOELG). From the theoretical perspective of agency theory, SOECGs are supposed to be superior to SOELGs due to the different monitoring levels they receive from the government and the public. Administratively, SOECGs belong to the central government and are closely monitored by its ministries. The Ministry of Finance collects investment gains and makes equity change decisions; the Trade Union Commission of Large Enterprises selects SOECGs' top management; the National Economic and Trade Commission is in charge of SOECGs' pivotal investments, bankruptcies, mergers, restructurings and transformations; the National Planning and Economic Commission handles fixed capital construction; and the Ministry of Labor determines the wages of employees. SOECGs are, in general, large nationwide and strategically important companies, which are subject to strict monitoring from the central government. SOECGs are always top enterprises in their industries and have nationwide operations, such as Sinopec, Bank of China and China Mobile, etc. In this sense, their business success or failure does have a great impact on the whole national economy and they are thus exposed to strict monitoring not only from the central government but also from the public. In contrast, SOELGs are comparatively smaller and most of them only have regional operations, therefore, they are not equally important as SOECGs and attract less

outside attention. Moreover, the supervision level SOELGs receive from the regional governments and their affiliated departments varies across regions, due to the legal environment inequality in China.

4.2.2.3. Private investors

This type of the ultimate controller includes both private firms and individuals. In most cases a private investor becomes the largest controlling shareholder through the acquisition of non-tradable shares from state shareholders, either at the time of the IPO or subsequently (Chen *et al.,* 2009). More recently, there are an increasing number of cases where a private firm has obtained the approval from the CSRC to go public. Unlike SAMBs and SOEs, these private investors have a much clearer target of profit-maximisation, and pay more attention to the market performance of their controlled PLCs.

4.2.2.4. The distinction between SAMBs and SOEs as the controller

Although SOEs and SAMBs are two main types of state entities, they differ as the ultimate owner of PLCs in many respects. Firstly, PLCs with SOELGs or SOECG as their ultimate controllers are similar to those controlled by private investors to some extent, in terms of risk borne and benefits shared. The SOEs have the rights to select their managers for the controlled PLCs and bear the corresponding risks of the consequences of the selected management teams. The after-tax profits drawn from their controlled PLCs are consolidated in SOEs' accounting reports as investment profits. These vested undistributed profits can be used by SOEs to fulfill their own development plans, hence the corporate performance of PLCs is

closely related to the performance of SOEs to a large extent. Moreover, managers of SOEs typically benefit from those profits as there is a close link between their monetary rewards and SOEs' performance, and intuitively much of their attention would be given to those PLCs they have influence on. In stark contrast, SAMBs are more like state agencies than modern commercial enterprises. SAMBs have rights to select the boards of directors as well as managers of PLCs, but bear no risks of the consequences of their selections. They collect vested profits from PLCs under their control and deliver them to the state treasury. The officials in SAMBs have no rights to use those profits for any purposes. Moreover, SAMBs' officials are civil cadres paid by the government and their remuneration and rewards are not related to the performance of PLCs they oversee (Chen *et al.*, 2009). Therefore, SAMBs' officials show a lack of incentive to better manage the controlled PLCs, since the performance of PLCs is not closely tied to their personal well-being. Secondly, SAMBs may find it more difficult to monitor PLCs. Unlike SOEs that control only one or a few PLCs, SAMBs often need to look after a number of PLCs as well as SOEs that are not listed. To make things even worse, these firms are always scattered across a range of industries, while officials in SAMBs typically have little relevant experience and lack the necessary skills to effectively monitor these firms. Moreover, officials are prohibited from being closely involved in PLCs' daily operations and usually have little direct contact with those PLCs, which has led to excess information asymmetry. The more severe the information asymmetry is, the more difficult for officials to effectively evaluate PLCs' management. Compared to SAMBs, SOEs typically have expertise in their controlled PLCs' businesses and are rewarded for

getting closely involved in their daily operations. Last but not least, SOEs' close links with their controlled PLCs and better know-how about their businesses enable them to pick up more competent management teams.

4.2.2.5. The relative efficiency of state vs. private controllers

As I have stressed, every state controller in essence has a two-fold identity. Each citizen with an extremely dispersed ultimate shareholding in those firms has insufficient incentives and ability to effectively monitor and discipline those state agents. Hence, according to agency theory, managerial discretion and non-profit-maximisation goals are expected for state firms. Shleifer and Vishny (1997) stress that the *de facto* control rights of the state-owned enterprises belong to bureaucrats who typically have goals dictated by their political interests rather than firms' profitability. In contrast, a PLC with a private investor as the ultimate controller has clearly defined property rights and is believed to show superiority in reducing the costs arising from the 'classic' agency problem. Indeed, a private investor's role in a PLC is such that he or she is typically equipped with detailed knowledge of the industry in which the PLC operates and will more effectively monitor the hired managers. The 'classic' agency costs will therefore be minimised when a private investor is the controlling shareholder. However, unlike state entities, private investors are more liable to expropriate the minority shareholders if their control rights are well in excess of their cash-flow rights.

The debate of the relative efficiency of state vs. private owners is actually a debate about the state's 'grabbing hand effect' and 'helping hand effect'. Most

previous studies believe state owners are less efficient than private owners based on the assumption that officials will abuse firms' resources to pursue political and social objectives other than the objective of profit-maximisation (Boycko *et al.*, 1996; Shleifer and Vishny, 1994). Replacing state's entities with private entities could better align the management with the corporate economic performance, thus tremendously reducing classic agency costs. However, it comes with a cost because the presence of a controlling private owner may trigger severe concerns about the expropriation of minority shareholders. In contrast, as Brada (1996) argues, state owners may improve firm performance in such a way that politicians have an incentive to prevent controlling shareholders and managers from engaging in behaviour that reduces the amount of corporate resources, even though they do not necessarily have profit-maximising objectives. In summary, the relative efficiency between two groups (state vs. private owners) remains an empirical question, as PLCs' corporate performance really depends on, to a large extent, which problem can be solved or mitigated more successfully.

I intend to extend the literature by for the first time arguing that the aforementioned five ultimate controllers all have different motivations and incentive structures that will lead to different economic performance of the PLCs they control. In this sense, previous studies cannot provide me with a clear direction in this respect. Therefore, I have to make my second prediction based on the above discussion along with the belief regarding the progress in constructing a sound legal environment that China has made over the past 30-plus years.

Hypothesis 2: Private investors as controlling shareholders have more incentives to closely monitor the management and play active roles to ensure profit-maximisation, hence producing the best performance for PLCs under their control. With respect to the relative efficiency of state owners only, SOEs should show superiority over SAMBs on PLCs' performances, SOECGs would lead to higher valuation of PLCs than SOELGs, and SAMBCG is assumed to be more efficient than SAMBLGs.

4.3. Research design

4.3.1. Data

The original sample for this study consists of all A-shares PLCs listed on The Shanghai Stock Exchange (SHSE) and The Shenzhen Stock Exchange (SZSE) from 2000 to 2007, subject to data availability. Data on both corporate accounting performance and ownership structure is from annual reports and publications collected by Shanghai Wind Information Co., Ltd[18]. Unlike most previous works using the type of shares held by the largest shareholder as the proxy for the controlling entity, I intend to identify the ultimate controller behind the largest shareholder, which requires a careful investigation into the control chain. Finding out the ultimate controller for each PLC in each year has proven to be a massive workload, as it is necessary to look into a PLC's annual report in each year in order to detect the identity of the controller. The workload will get even heavier as the number of PLCs increases and the time span extends. This might be a

[18] www.wind.com.cn is one of the major corporate data providers in China.

reason why some prior studies have no choice but to use share types as proxies for identities of the ultimate owner. Thanks to the financial support from the Business School PhD research account, this requirement has been accomplished by a customised dataset provided by Sinofin Financial Information Service Co., Ltd[19].

For each PLC in the sample, I identify the type of the controlling entity behind the largest shareholder and categorise these ultimate controllers into five groups (SAMBCG, SAMBLGs, SOECGs, SOELGs and private investors).

The initial sample has 10349 observations. The sample screening process is as follows: (1) Exclude firms for which operating performance data is not available and follow the tradition of literature to remove financial firms, due to them using different financial reporting system(1031 observations dropped); (2) Drop firms whose leverage ratio is greater than one(7 observations dropped); (3) Eliminate firms with ST or PT designation during my research period[20](1731 observations dropped); (4) Remove firms that do not have continuous operations (listing) for at

[19] www.sinofin.net is one of the major corporate data providers in China.

[20] It is mandated by the CSRC that if a Chinese listed company reports accounting losses in two consecutive years, its stock will be put under 'Special Treatment' status (ST). If it fails to turn its accounting earnings back to positive in the third year, i.e. it reports losses for three consecutive years, it will be put under 'particular treatment' (PT) status. The market has imposed various trading and financial restrictions on ST and PT stocks. For example, unlike other normal listed companies, the stock price movement of an ST company is restricted to be no more than five per cent in either direction, and the company's semi-annual report must be audited. Furthermore, an ST company cannot raise additional capital from the stock market. A listed company with PT designation can only be traded on Fridays with a stock price limit of five percent fluctuation per day. Moreover, it will be delisted from the market if it continues to suffer losses in the fourth year. The rationale behind the ST and PT designations is that ST and PT companies are bad performers in the long run, and it is necessary to restrict or delist them in order to protect the interests of investors (Jiang and Wang, 2008).

least four years during the research period(256 observations dropped). As a result, the final sample is an unbalanced panel that consists of 7324 firm-year observations, and there are 1043 firms in the sample.

Panel A of Table 4.1 presents a detailed distribution of the sample of Chinese PLCs used in the analysis according to firms' ultimate controllers, and the balance of the panel is stated in panel B.

Table 4.1 Summary of the distribution of sample observations

Panel A: sample distribution per year						
Year	**SOELG(Obs.)**	**SAMBLG(Obs.)**	**PRIVATE(Obs.)**	**SAMBCG(Obs.)**	**SOECG(Obs.)**	**Total**
2000	377	155	61	2	99	694 (9.5%)
2001	439	177	80	1	122	819 (11.2%)
2002	469	169	125	0	131	894 (12.2%)
2003	346	264	202	4	148	964 (13.2%)
2004	188	403	255	76	102	1,024 (13.9%)
2005	185	395	237	81	99	997 (13.6%)
2006	129	396	268	105	81	979 (13.4%)
2007	87	417	260	143	46	953 (13%)

Total(Pct)	2220 (30.4%)	2376 (32.4%)	1488 (20.3%)	412 (5.6%)	828 (11.3%)	7324 (100%)

Panel B: balance of the panel

Number of observations	Number of firms
4	103
5	94
6	93
7	140
8	613

Notes: (1) SAMBCG is the state asset management bureau at the central level, SAMBLG is state asset management bureaus at the regional level, SOECG is an SOE supervised by the central government, SOELG is an SOE supervised by the regional government and PRIVATE is a Private investor; (2) Percentages are in brackets.

4.3.2. Methodology

4.3.2.1. Generalised method of moments (GMM)

Most previous studies use Ordinary Least Square (OLS) to test and examine the empirical issues of corporate governance in China. However, OLS may provide inconsistent estimation as it cannot appropriately address the endogeneity problem which seriously violates an assumption necessary for the consistency OLS. In order to work around such a problem, some others wield the Fixed Effects (FE) model to attack the fixed effects by using Within Group transformation. The Within Group transformation is able to remove the fixed effects in static models, but does not eliminate dynamic panel bias when the lagged dependent variables are included as the explanatory variables[21]. Hence, what is really needed is a different estimation technique that removes the fixed effects while avoiding the dynamic panel bias. In this sense, Generalised Method of Moments (GMM) could be an ideal choice to provide consistent estimates for my research. Working in the GMM framework, I have decided to use 'System GMM' (Blundell and Bond, 1998) which is considered more efficient than the 'First-differenced GMM' as the estimation method. Two relevant post-estimation tests should be carried out in order to ensure the validity of estimation results. I adopt Arellano-Bond test for autocorrelation in the idiosyncratic disturbance term $\varepsilon_{i,t}$ and expect to see the absence of order 2 serial correlation in the first differenced errors. I also use Sargan test to test the joint validity of the instruments. Rejection of Sargan test suggests that the model is over-fitted by too

[21] See Roodman (2006), p.18.

many instruments and if this is the case we need to re-think the set of instruments that should be included in the model.

4.3.2.2. First-differenced GMM

I first set out the first-differenced GMM estimation approach. Without loss of generality, we now consider the following regression model with unobserved individual specific effects

$$y_{i,t}=\alpha y_{i,t-1}+f_i+\varepsilon_{i,t} \quad \text{(a)}$$

for $i = 1, \ldots N$ and $t = 2, \ldots, T$, where $f_i + \varepsilon_{i,t} = u_{i,t}$ has the standard error components structure

$E[f_i]=0$, $E[\varepsilon_{i,t}] = 0$, $E[f_i\varepsilon_{i,t}]= 0$ for $i = 1, \ldots, N$ and $t = 2, \ldots, T$.

Also, I assume the idiosyncratic shocks, $\varepsilon_{i,t}$ are serially uncorrelated

$E[\varepsilon_{i,t}\varepsilon_{i,s}]=0$ for $i = 1, \ldots, N$ and $s \neq t$

and that the initial conditions $y_{i,1}$ are predetermined

$E[y_{i,1}\varepsilon_{i,t}] = 0$ for $i = 1, \ldots, N$ and $t = 2, \ldots, T$.

In order to remove the fixed effects, first-differencing the model (a) gives

$$(y_{i,t} - y_{i,t-1})=\alpha(y_{i,t-1} - y_{i,t-2})+(f_i-f_i)+(\varepsilon_{i,t} - \varepsilon_{i,t-1}) \quad \text{(b)}$$

And for convenience, I rewrite the above model as

$$\Delta y_{i,t}=\alpha\Delta y_{i,t-1}+\Delta\varepsilon_{i,t} \quad \text{(c)}$$

The fixed effects have been successfully removed as expected. However, the model (c) has a problem of its own, as the first-differenced lagged dependent variable and the first-differenced idiosyncratic shock are correlated, that is, $\text{Cov}(\Delta y_{i,t-1}, \Delta\varepsilon_{i,t}) \neq 0$. Unlike the static panel model, this first differenced

dynamic model cannot be estimated by OLS because of such a correlation. To make things even worse, the fixed-effect method widely adopted in estimating the static panel models fails to address this issue. Under the Within Group transformation, we use mean-deviations transformation to get rid of the fixed effects. Then, the lagged dependent variables become $y^*_{i,t-1}=y_{i,t-1}-\frac{1}{T-1}(y_{i,2}+\cdots+y_{i,T})$ while the idiosyncratic shock becomes $\varepsilon^*_{i,t}=\varepsilon_{i,t}-\frac{1}{T-1}(\varepsilon_{i,2}+\cdots+\varepsilon_{i,T})$ (Roodman,2006). Obviously, within a dynamic panel model, the $y_{i,t-1}$ term in $y^*_{i,t-1}$ correlates negatively with the $-\frac{1}{T-1}\varepsilon_{i,t-1}$ in $\varepsilon^*_{i,t}$, thus leading to inconsistent estimates. Unlike the Within Group transformation, the first-differenced models can be estimated by GMM using values of y lagged by two or more periods as instruments, provided assumptions set out at the beginning of this section are satisfied. Because these deeper lags remain orthogonal to the $\Delta\varepsilon_{i,t}$ term, they are therefore available as valid instruments. Together, under the first-differenced GMM, the assumptions imply 0.5(T-1)(T-2) moment conditions as follows:

$E[y_{i,t-s}\,\Delta\varepsilon_{i,t}]=0$ for $t=3,\ldots,T$ and $s\geq 2$.

As long as the values of y lagged by two or more periods are valid instruments, first-differenced GMM is able to yield consistent estimates as $N\rightarrow\infty$ with T fixed.

4.3.2.3. System GMM

It is worth noting that the first-differenced GMM has been found to have poor finite sample properties, particularly when the number of time periods available is small. Blundell and Bond (1998) found that the first-differenced GMM may be

subject to a downward finite sample bias, according to their simulation results. This occurs as the autoregressive process becomes too persistent or as the variance of the fixed effects increases relative to the variance of the idiosyncratic shock (Bond *et al.*, 2001). Building on the work of Arellano and Bover (1995), Blundell and Bond (1998) propose the system GMM estimator which may have superior finite sample properties by making an additional assumption that $E[f_i \Delta y_{i,2}]=0$ for $i = 1, \ldots, N$. This additional assumption only allows the means of y series to differ across individuals but to remain constant over time for each individual (Bond *et al.*, 2001). Together with the assumptions set out in the previous section, this additional assumption yields additional T-2 linear moment conditions as follows:

$$E[\Delta y_{i,t-1} \varepsilon_{i,t}] = 0 \text{ for } i = 1, \ldots, N \text{ and } t = 3, \ldots, T.$$

These moment conditions suggest the use of lagged first-differences of the y series as instruments for equations in levels.

The system GMM estimator combines the standard set of equations in first-differences (e.g. Model (c)) with values of y lagged by two or more periods as instruments, with an additional set of equations in levels (e.g. Model (a)) with lagged first-differences of the y series as instruments (Bond *et al.*, 2001). In a nutshell, the system GMM exploits a system of both the set of moment conditions in first-differences and the additional set of moment conditions in levels, and that is why it is called the 'system' GMM.

4.3.2.4. Endogenous regressors and predetermined regressors

What if there are any other regressors besides the lagged dependent variable that correlate with f_i and are endogenous? Without loss generality, I now consider a model with an additional right-hand-side variable $x_{i,t}$.

$$y_{i,t}=\alpha y_{i,t-1}+\beta x_{i,t}+f_i+\varepsilon_{i,t} \quad \text{(d)}$$

for $i = 1, \ldots, N$ and $t = 2, \ldots, T$, where $x_{i,t}$ is endogenous in the sense that

$E[x_{i,t}\varepsilon_{i,s}]\neq 0$ for for $i = 1, \ldots, N$ and $s\leq t$.

Similarly as I have done in section 4.3.2.2, taking first differences to eliminate the fixed effects f_i, model (d) can then be rewritten as

$$\Delta y_{i,t}=\alpha\Delta y_{i,t-1}+\beta\Delta x_{i,t}+\Delta\varepsilon_{i,t} \quad \text{(e)}$$

The moment conditions for first-differences equations

$E[x_{i,t-s}\,\Delta\varepsilon_{i,t}]=0$ for $t=3,\ldots,T$ and $s\geq 2$

are available here, in addition to those in section 4.3.2.2. The above conditions mean that values of $x_{i,t}$ lagged by two or more periods can be used as instruments for equations in first-differences.

If the $x_{i,t}$ variables are predetermined with respect to $\varepsilon_{i,t}$, which implies that

$E[x_{i,t}\varepsilon_{i,s}]\neq 0$ for for $i = 1, \ldots, N$ and $s<t$,

the values of $x_{i,t}$ lagged one period up are available as instruments.

Similarly in addition to moment conditions proposed in section 4.3.2.3, it is valid assuming that changes in endogenous $x_{i,t}$ variables are uncorrelated with the individual effects,

$E[\Delta x_{i,t} f_i] = 0$ for $i = 1, \ldots, N$ and $t = 2, \ldots, T$,

and then the moment conditions for equations in levels,

$E[\Delta x_{i,t-1} \varepsilon_{i,t}] = 0$ for $i = 1, \ldots, N$ and $t = 3, \ldots, T$

are available in addition to those given in section 4.3.2.3. These moment conditions demonstrate that the lagged first-differences of endogenous $x_{i,t}$ variables can be used as instruments for the levels equations. And if $x_{i,t}$ variables are predetermined in the sense that $E[x_{i,t}\varepsilon_{i,s}] \neq 0$ for for $i = 1, \ldots, N$ and $s<t$, the contemporaneous $\Delta x_{i,t}$ is also valid.

4.3.3. Model specification and definition of variables

4.3.3.1. Regression model

In order to determine and quantify how various corporate specific factors, including ownership structure, financial factors and board characteristics, may impact on PLCs' corporate performance, I employ a dynamic regression model of the following form:

$$Performance_{i,t} = \sum_{j=1}^{p} \alpha_j \, Performance_{i,t-j} + \boldsymbol{D\theta + C\beta + B\gamma + I\delta} + \tau_t + f_i + \varepsilon_{i,t} \quad (1)$$

The Model (1) is a general regression model where $Performance_{i,t}$ (corporate performance) is measured by return on assets (ROA), return on equity (ROE) and return on sales (ROS). $\sum_{j=1}^{p} \alpha_j \, Performance_{i,t-j}$ is a set of lagged dependent variables incorporated as the explanatory variables to make the model dynamic. The reason why I use lags of corporate performance as explanatory variables is that past corporate performance of a PLC is believed to have laid the financial

basis for its corporate performance in the current year, and particularly the financial basis at the beginning of the current year. A PLC with outstanding performance in the past tends to show superiority in the future. However, this persistent effect may fade away over time. The deeper the lag, the weaker the influence it would have on current corporate performance. In this sense this set usually consists of first one or two lags of $Performance_{i,t}$ only. $\boldsymbol{D}$ is a vector of dummy variables to identify five groups of the ultimate controller, $\boldsymbol{C}$ is a vector of various corporate financial factors , $\boldsymbol{B}$ is a vector of a number of board characteristics, and $\boldsymbol{I}$ is a vector of variables capturing the industrial characteristics. f_i are unobserved panel-level effects and $\varepsilon_{i,t}$ are idiosyncratic shocks. f_i and $\varepsilon_{i,t}$ are assumed to be independent for each i over all t . I also include time dummies to remove universal time-related shocks from the errors. τ_t is a vector of time dummies. $\alpha_j, \boldsymbol{\theta}, \boldsymbol{\beta}, \boldsymbol{\gamma}$ and $\boldsymbol{\delta}$ are unknown coefficients to be estimated.

4.3.3.2. Measuring operating performance

In order to measure PLCs' operating performance, I follow the tradition of the literature by using return on assets (ROA) and return on equity (ROE) as the dependent variable in regression models (Li *et al.*, 2008; Tian and Estrin, 2008; Wei, 2007). In contrast to ROA and ROE, return on sales (ROS) is thought to be less subject to accounting manipulation and is also used as the dependent variable for the check of robustness (Fan *et al.*, 2007; Chen *et al.*, 2009).

4.3.3.3. Augmented by corporate financial characteristics

Leverage: this is an independent variable computed as the ratio of total liabilities to total assets. This ratio is supposed to be negative to corporate performance, as higher levels of leverage ratio means higher levels of debt which will lead to more interest payouts at each period and thus lower corporate values (Tian and Entrin, 2008). However, Jensen (1986) argues that the existence of liabilities could help reduce the free cash flow problem and force managers to become more efficient because the pressure from the debt issuers may force managers to run firms more efficiently and avoid investing in negative NPV projects.

Lnsize: this is measured by the natural logarithm of total assets of firms and is seen as a proxy of firm size. Chen *et al* (2009) argue that the size of a firm may have mixed effects on corporate performance. Most large-sized PLCs in China are former SOEs and are therefore more likely to be subject to some typical agency problems that are prevalent in SOEs. Hence, in this sense, the size may have a negative impact on corporate performance. However, larger corporate size enables PLCs to have easier access to financial loans from banks. Moreover, larger corporate size also ensures solid backup from the government. In this regard, corporate size could have positive effects on corporate performance.

Growth: this is measured by the annual growth rate of sales. PLCs with high growth rate should have better profit-maximisation opportunities and consequently a higher corporate valuation (Chen, 2001).

Topone: this is an independent variable to capture the level of ownership concentration measured by the percentage of total shares held by the largest shareholder. The largest shareholder's shareholding is a 'double-edged' sword in corporate governance as I have discussed in Section 4.2. Moreover, I posit that there are non-linear relations between ownership concentration and corporate performance, and to test this on my data, the quadratic term of Topone, Topone2 is included.

Top4_1: this is a ratio measured by the percentage of total shares held by the other top five shareholders over that held by the largest shareholder. This ratio reflects the comparison of the controlling power in a PLC between these two groups. Some recent studies show that the presence of multiple blockholders may be an effective way to provide internal monitoring that increases corporate value by reducing the possibility of the expropriation of minority shareholders by the largest shareholder (Pagano and Roell, 1998; Bloch and Hege, 2001). However, the presence of multiple blockholders may not always increase corporate value and such a positive role is likely to depend on the degree of investor protection. Faccio *et al* (2001) found that group-affiliated firms in Europe provide significantly higher dividend rates than similar firms in Asia, suggesting that the multiple non-management blockholders in weak legal environments are more likely to collude with the controlling shareholder to expropriate minority shareholders.

4.3.3.4. Augmented by board characteristics

Size of the Board (Boardsize): the number of persons serving on the board is usually seen as the proxy for the size of the board. According to the Company Law enacted in 1994, a PLC should have a board of directors that consists of five to nineteen people. Theoretically, the board of directors should look after the interests of all shareholders, instead of the interests of the controlling shareholder only. It should play an active role in monitoring firm's daily operation and take effective actions to avoid managers abusing corporate resources. However, taking into account the fact that the controlling shareholder has a tendency to send its members to sit on a board in order to enhance his control and his control rights are always well in excess of his cash-flow rights, the question of how effective the board is at increasing corporate performance remains an empirical issue. Klein (1998) finds that there is little relation between the board composition and corporate performance, while Jensen (1993) argues that small boards are more efficient than large ones.

Shares held by the board (Boardshare): it is argued that directors' ownership can serve as a mechanism to better align directors' interests with those of outside shareholders. However, the directors' ownership is like the managerial ownership, to some extent, and can also be seen as a 'double-edged' sword. Its ultimate impact really depends on the trade-off between the 'alignment' effects and 'entrenchment' effects it brings in.

Independent directors (Independent): this is a ratio of the number of independent directors serving on the board over the number of directors. According to the CSRC's 'Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies'[22] enacted in 2001, independent directors in any PLC should make up no less than one third of directors serving on the board by 30th June, 2003. A core theme of the independent directors on the board is to serve as a check on both management and the board in the interests of all shareholders. In other words, it is necessary for them to be 'independent' of the firm to resolve the agency problem. Unlike insider directors, independent directors are less subject to the influence of blockholders and therefore more capable of efficiently monitoring a firm's operation. Hence, in a sense, the presence of the independent directors should impact positively on corporate valuation.

Independence of the board chairman (Duality): some have argued that the duality of roles of the chairman of the board and the CEO is a very indicative measure of the independence of the board. The central concern is that joint service as the CEO and board chairman may erode the corporate system of checks and balances and compromise independence between directors and firm managers. Advocates of more efficient corporate governance are against the joint service, and argue for independent board leadership.

---

[22] See CSRC's zhengjianfa[2001] No.102

4.3.3.5. Augmented by industrial characteristics

Market share (Ms): in order to account for the determinants of corporate performance with regards to the industrial characteristics, I follow the standard to include a variable called market share on the right-hand side of the equations. Market share is calculated as total firm sales divided by industry sales, which is the sum of all firms' sales within an industry. A firm with a large market share could be expected to have high profitability due to three possible reasons. Firstly, a large market share may enable the firm to have a share-based differentiation advantage, since risk-averse customers may favour a large share firm. Secondly, a large market share may allow the firm to have more bargaining power relative to its rival oligopolies within an oligopoly environment in which the large share firms are likely to coordinate with each other in order to raise the industry profitability. Last but not least, a large market share could make the firm achieve a cost advantage over other firms with smaller market shares because of economies of scale. Hence, I expect a positive link between market share and corporate performance.

Market Concentration (Mcon): the market concentration has also been included so as to capture another important aspect of industry characteristics and is calculated in the Herfindahl manner as the sum of the squared market shares of the firms in an industry. Hence, the market concentration should range between zero and one. The closer it is to unity, the more concentrated the industry. A highly concentrated industry means reduced competition and has certain industrial structures that are conducive to oligopoly conduct, enabling firms to

make more abnormal profits than it would in unconcentrated industries. In this sense, I expect that the market concentration should positively affect the corporate performance.

The existing literature on the effects the industry characteristics may exert on firm performance has provided a clear guidance on the inhalation of appropriate variables for my research and I follow the standard practice (Geroski *et al.,* 1993; Haynes *et al.,* 2002) to include variables capturing the market share (Ms) and the market concentration (Mcon) respectively.

Table 4.2 Summary of variables

Variable Name	Variable Definition	Expected Sign
Performance	ROA, ROE and ROS	
Leverage	Ratio of total liabilities over total assets	+/-
Topone	The percentage of shares held by the largest shareholder	+/-
Topone2	Quadratic term of Topone	+/-
Top4_1	Ratio measured by the percentage of total shares held by the other top four shareholders over that held by the largest shareholder.	+/-
Growth	Annual growth ratio of Sales	+
Lnsize	Natural logarithm of total assets of firms	+/-
SAMBCG	Dummy variable coded 1 if the ultimate controller is the SAMBCG; otherwise 0	-
SAMBLG	Dummy variable coded 1 if the ultimate controller is an SAMBLG; otherwise 0	-
SOECG	Dummy variable coded 1 if the ultimate controller is an SOECG; otherwise 0	-
SOELG	Dummy variable coded 1 if the ultimate controller is an SOELG; otherwise 0	-
Private	Dummy variable coded 1 if the ultimate controller is a private investor; otherwise 0	+
State	Dummy variable coded 1 if the ultimate controller is not a private investor; otherwise 0	-
Boardsize	Size of board (the number of directors)	-
Boardshare	Percentage of shares held by directors	+/-
Independent	Ratio of the number of independent directors to the number of directors	+
Duality	Dummy variable coded 1 if board chairman is the CEO; otherwise 0	-
Ms	Market share calculated as total firm sales divided by industry sales	+
Mcon	Market concentration	+

Notes: Real variables are deflated using the China's annual CPI.

4.3.4. Descriptive statistics

Table 4.3 Summary of descriptive statistics

Panel A								
Group	**statistics**	**ROA**	**ROE**	**ROS**	**Topone**	**Top4_1**	**Lnsize**	**Leverage**
Total	**Mean**	0.0247	0.0333	0.026	0.421	0.5217	21.243	0.4865
	Median	0.0297	0.0637	0.0519	0.4072	0.3192	21.1459	0.4942
	SD	0.0665	0.2201	0.3404	0.1693	0.5514	0.929	0.1795
	Min	-0.473	-1.584	-3.4862	0.006	0.0013	18.7002	0.0741
	Max	0.1994	0.9348	0.8483	0.8858	3.2998	23.9949	0.9986
SOELG	**Mean**	0.0254	0.0269	0.0362	0.4591	0.4665	21.1555	0.4663
	Median	0.0323	0.0631	0.0606	0.47	0.2046	21.0984	0.4643
	SD	0.0647	0.2188	0.3426	0.173	0.5512	0.8568	0.1757
	Min	-0.473	-1.584	-3.4862	0.006	0.0025	18.7002	0.0741
	Max	0.1965	0.9348	0.8239	0.8858	3.2694	23.9949	0.9914
SAMBLG	**Mean**	0.0239	0.0322	0.0339	0.4221	0.4326	21.407	0.4988
	Median	0.0269	0.0591	0.0434	0.4146	0.2413	21.35	0.5114
	SD	0.0623	0.1954	0.2601	0.1569	0.4805	0.8872	0.1721
	Min	-0.473	-1.5811	-3.3861	0.0355	0.0028	18.837	0.0741
	Max	0.1971	0.7728	0.8337	0.8375	2.8885	23.9949	0.9986
Private	**Mean**	0.0168	0.0297	-0.0272	0.3186	0.8164	20.9223	0.5247
	Median	0.0261	0.0737	0.0535	0.2877	0.7452	20.889	0.5383
	SD	0.0778	0.2767	0.5021	0.1348	0.6045	0.8401	0.1781
	Min	-0.473	-1.489	-3.4462	0.0324	0.0033	18.7002	0.0741

	Max	0.1994	0.9348	0.8483	0.8147	3.2998	23.9949	0.9938
SAMBCG	Mean	0.033	0.0549	0.0606	0.4585	0.3924	21.858	0.4986
	Median	0.0289	0.0669	0.0438	0.4746	0.204	21.659	0.5078
	SD	0.0647	0.2015	0.1462	0.1474	0.4304	1.1509	0.1919
	Min	-0.4131	-1.5721	-0.8958	0.1442	0.0068	19.2362	0.0741
	Max	0.1984	0.694	0.8435	0.85	2.0648	23.9949	0.9469
SOECG	Mean	0.0351	0.0496	0.054	0.4812	0.4605	21.2769	0.4305
	Median	0.035	0.0623	0.0567	0.4994	0.2477	21.1038	0.4273
	SD	0.0592	0.1797	0.2144	0.1794	0.5149	1.0066	0.1868
	Min	-0.4324	-1.5702	-2.9269	0.11	0.0013	18.7002	0.0741
	Max	0.1983	0.6825	0.8465	0.85	3	23.9949	0.9865

Panel B

Group	statistics	Growth	Boardshare	Boardshsize	Independent	Duality	Ms	Mcon
Total	Mean	0.2453	0.0035	9.6828	0.2641	0.0947	0.011	0.0544
	Median	0.1572	0	9	0.3333	0	0.0019	0.0123
	SD	0.5609	0.0352	2.2788	0.141	0.2928	0.0389	0.1134
	Min	-0.8255	0	2	0	0	0.0001	0.0079
	Max	3.9476	0.7481	23	0.75	1	0.9356	0.8872
SOELG	Mean	0.2215	0.0004	9.7751	0.2026	0.085	0.011	0.046
	Median	0.1396	0	9	0.25	0	0.0018	0.012
	SD	0.5445	0.004	2.3577	0.1534	0.279	0.0293	0.1001
	Min	-0.8255	0	2	0	0	0.0001	0.0079
	Max	3.9094	0.1218	20	0.6	1	0.3927	0.8872
SAMBLG	Mean	0.2218	0.0003	9.6854	0.2882	0.1135	0.0081	0.0574
	Median	0.1595	0	9	0.3333	0	0.002	0.0123
	SD	0.4656	0.0016	2.192	0.128	0.3173	0.0188	0.1208
	Min	-0.8255	0	3	0	0	0.0001	0.0079
	Max	3.9244	0.0359	21	0.6154	1	0.2551	0.8872

Private	**Mean**	0.3106	0.0159	9.0753	0.3159	0.1129	0.0047	0.0414
	Median	0.1592	0	9	0.3333	0	0.0012	0.0123
	SD	0.7528	0.0765	2.1035	0.1098	0.3166	0.0101	0.062
	Min	-0.8255	0	4	0	0	0.0001	0.0079
	Max	3.9476	0.7481	23	0.75	1	0.1372	0.8757
SAMBCG	**Mean**	0.287	0.0003	10.085	0.3358	0.035831	0.024	0.0809
	Median	0.1894	0	9	0.3333	0	0.0035	0.0123
	SD	0.573	0.0038	2.229	0.0712	0.186171	0.0597	0.1603
	Min	-0.8255	0	5	0	0	0.0001	0.0081
	Max	3.9324	0.0549	19	0.5556	1	0.39	0.8757
SOECG	**Mean**	0.2391	0.0006	10.3188	0.2312	0.057828	0.024	0.0781
	Median	0.1797	0	9	0.3333	0	0.003	0.0123
	SD	0.4177	0.008	2.3814	0.1462	0.233583	0.0881	0.1548
	Min	-0.8255	0	5	0	0	0.0001	0.0079
	Max	3.9372	0.1334	19	0.5556	1	0.9356	0.8872

Notes: This table shows the sample characteristics for Chinese PLCs over the period 2000 to 2007.

Table 4.3 presents descriptive statistics of the dependent and explanatory variables used in the regression analysis, and the Correlation matrix for the variables is included in Table A4.1 in the Appendix.

Some interesting facts are worth noting. To evaluate the relationship between corporate performance and ownership structure, I use ROA, ROE and ROS as measures of corporate performance. SAMBCG on average stands out as the best group in terms of both ROE and ROS, with its mean of ROE being 0.0549 and mean of ROS being 0.0606. SOECG has on average the best performance on ROA amongst the five groups, and its mean ROA is around 0.035. Surprisingly, private investors underperform in all three types of performance measurement, with average ROS even being negative. Nevertheless, the descriptive statistics can only provide unconditional means of each measurement, and in the following Section I still need to test the real impact of each type of ultimate controller on corporate performance by using regression techniques with relevant factors controlled.

As for the ownership concentration, I use the percentage of shares held by the largest shareholder as a proxy. As far as my sample is concerned, it can be concluded that the ownership of PLCs in China is highly concentrated, with the largest shareholder holding 42.1% of total shares on average. State entities (SAMBCG, SAMBLGs, SOECGs and SOELGs) on average hold more than 44.7% percent of total outstanding shares. In contrast, their private counterparts (private investors) own around 31.86% of total outstanding shares on average. I use annual growth rate of sales as a proxy for the growing opportunities that a PLC could

obtain. Not surprisingly, private investors have significantly faster growing speeds than state owners with an average growth rate of 31.06%, which is consistent with most prior studies. Director's ownership is a common way to align director's interests with those of all shareholders, yet it seems that PLCs in China place little value on this internal mechanism, as the average level of director's ownership is merely 0.35% of total outstanding shares. As I have discussed in the previous Section, the duality of roles of the board chairman and the CEO could be harmful to corporate performance. Of five groups of the ultimate controller, SAMBCG has the lowest level and on average only about 3.58% of the Chairmen in PLCs controlled by SAMBCG are CEOs at the same time.

4.4. Empirical tests and results

In this section, I test the two hypotheses by using system GMM (Blundell and Bond, 1998) and Splines Regression. To ensure the results are not influenced by the presence of outliers, all variables except dummy variables are winsorised at both tails of their distribution. The winsorisation is at the both 1 and 99 percentile points of the distribution. Before performing the regressions, it pays to discover how the types of classification that most prior studies have adopted may lead to erroneous conclusions.

4.4.1. Two types of misclassification

Most previous studies always run into two types of misclassification of Chinese PLCs, and their results are by no means valid in this sense. The first type of misclassification (e.g. Xu and Wang, 1999; Chen, 2001; Firth *et al.*,2008), in

essence, categorises PLCs based upon the legal classification of shares, which lumps PLCs roughly into three groups, which are entities holding state shares, entities holding legal-person shares and entities holding tradable shares. Such classification is rather confusing. Most importantly, it should be noted that legal-person shares and tradable shares can be held by a range of heterogeneous entities, ranging from wholly state-owned enterprises to state agencies to private firms. To see how it may lead to misleading results, I use two firm-year observations in my sample to give a convincing example. The two observations I have selected are Konka (Stock Code: 000016) and Great Wall (Stock Code: 000066) in 2004, and both are controlled by SAMBCG. However, they are classified into two groups (entities holding state shares and entities holding legal-person shares) instead of one group in previous studies, due to the fact that SAMBCG holds state shares in Great Wall, while legal-person shares are held in Konka. It would be rather illogical to enter them into two groups when their *de facto* controller types are actually the same, and conclusions drawn by those works are therefore misleading and invalid.

The second type of misclassification is 'less' confusing than the first one, as it traces the ultimate controller for each PLC in their studies and then classifies PLCs correspondingly. However, it distorts people's understanding about Chinese PLCs by making an invalid assumption that all state entities tend to converge in ways they direct their controlled PLCs (see, for example, Kato and Long, 2006; Chen *et al.*, 2007). As I have documented in the previous section, state ownership is scattered among heterogeneous state entities and each of them have different motivations and incentive structures. In order to see how classification adopted in

my research will differ from previous studies, I just take four firm-year observations in 2005 for example. The four observations I have selected are Wandong Medical (Stock code: 600055), Amoi (Stock code:600057), Hisense (Stock code:600060) and Eastern airline (Stock code:600115), and they are controlled by SOELG, SOECG, SAMBLG and SAMBCG respectively and thus are lumped into four separate groups in my study. In prior literature, they have been treated as only one group - the state - which might obscure the real impact of the state as the ultimate controller. In the following sections, I intend to show what an invalid assumption this type of misclassification has imposed on some prior studies and how we can get over it by assuming heterogeneity amongst a range of state entities.

4.4.2. State vs. private

Although the second type of misclassification seems quite 'close' to the correct classification, it would never be possible for studies using it to provide any valid policy suggestions. To demonstrate the shortcomings embedded in the second type of misclassification, I adjust the general regression model (1) to test the hypotheses and the adjusted regression model (2) is as follows:

$$Performance_{i,t}=\sum_{j=1}^{p} \alpha_j Performance_{i,t-j}+\theta_1 \boldsymbol{State}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i +\varepsilon_{i,t} \quad (2)$$

Actually, I run following regression models for each dependent variable. I incorporate both the first and the second lags of dependent variables as explanatory variables in all three models.

$$ROA_{i,t}=\sum_{j=1}^{2}\alpha_j ROA_{i,t-j}+\theta_1 \boldsymbol{State}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i+\varepsilon_{i,t} \quad (2.1)$$

$$ROE_{i,t}=\sum_{j=1}^{2}\alpha_j ROE_{i,t-j}+\theta_1 \boldsymbol{State}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i+\varepsilon_{i,t} \quad (2.2)$$

$$ROS_{i,t}=\sum_{j=1}^{2}\alpha_j ROS_{i,t-j}+\theta_1 \boldsymbol{State}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i+\varepsilon_{i,t} \quad (2.3)$$

Table 4.4 reports regression results when PLCs are lumped into two groups, i.e. state and private. Although results generated by OLS and fixed-effects estimators are also reported, I intend to draw conclusions mainly based on the estimates provided by the 'System GMM' method. As I have discussed in the Section 4.3, OLS and fixed-effects estimators are actually biased estimators for dynamic panel data. In fact, the OLS estimate of the coefficient of the lagged dependent variable is upward biased while that obtained with a fixed effects estimator is downward biased. In this sense, they are able to provide a range that should contain good estimates of the true lagged dependent variable, and one would expect the 'System GMM' estimate to lie between the two[23].

Based upon the regression results, it could be easily concluded that the private entities perform better than their state counterparts in terms of all types of

[23] Bond *et al* (2001) have provided a test to see whether the system GMM estimator is the appropriate one. This test consists of comparing the coefficient of the lagged dependent variable obtained when the equation is estimated by OLS, fixed effects and first-difference GMM. As the OLS estimate of the coefficient of the lagged dependent variable is upward biased while that obtained with a fixed effects estimator is downward biased, one would expect the first-difference GMM coefficient to lie between the two. If however, it lies below or very close to the fixed-effects estimate then one needs to use the system GMM estimator. Although I have found that in my study the majority of results produced by both first-difference and system GMM estimators are similar, the coefficients of the lagged dependent variable given by the first-difference estimator are sometimes close to or even smaller than the corresponding fixed-effects estimates. Therefore, I choose to rely on the system GMM estimator.

performance measurement and this conclusion is consistent with many prior studies. However, in the next sub-section I will adopt the correct classification to show how results based on such types of classification might distort our understanding about Chinese PLCs.

Table 4.4 GMM Estimation - State vs. Private

	(2.1)			(2.2)			(2.3)		
Performance=	ROA			ROE			ROS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM
$Performance_{it-1}$	0.3117***	-0.0392	0.2310***	0.1922***	-0.1571***	0.1431***	0.2135***	-0.0904***	0.1246***
	(13.19)	(-1.60)	(11.93)	(5.23)	(-4.39)	(8.73)	(6.02)	(-2.75)	(9.37)
$Performance_{it-2}$	0.0241	-0.2119***	-0.0541***	-0.0541*	-0.3239***	-0.1306***	-0.0024	-0.2176***	-0.0625***
	(1.15)	(-9.95)	(-3.69)	(-1.71)	(-9.38)	(-10.33)	(-0.08)	(-7.78)	(-6.38)
$Boardsize_{it}$	0.0002	-0.0005	-0.0017*	0.0004	-0.0032	-0.0086***	0.0017	0.0002	-0.0048*
	(0.69)	(-0.76)	(-1.76)	(0.25)	(-1.27)	(-2.82)	(1.19)	(0.05)	(-1.73)
$Duality_{it}$	0.0001	0.0060	0.0071	-0.0047	0.0148	0.0219	0.0088	0.0340*	0.0407**
	(0.03)	(1.40)	(1.40)	(-0.39)	(0.87)	(1.24)	(0.77)	(1.77)	(2.52)
$Boardshare_{it}$	0.0554	0.6100	-0.2871	0.1642	1.6351	-1.2496	-0.0916	1.9880	-1.8293*
	(0.64)	(1.56)	(-0.82)	(0.80)	(0.98)	(-0.96)	(-0.32)	(1.16)	(-1.92)
$Independent_{it}$	0.0253**	0.0311**	0.0757***	0.0652*	0.0519	0.0870	0.1425***	0.1261**	0.1745**
	(2.37)	(2.07)	(3.01)	(1.73)	(0.97)	(1.16)	(3.33)	(2.08)	(2.27)
$Lnsize_{it}$	0.0099***	0.0303***	0.0153***	0.0450***	0.1998***	0.0737***	0.0376***	0.1217***	0.0319***
	(8.83)	(5.88)	(3.57)	(10.23)	(8.40)	(4.34)	(7.70)	(6.98)	(2.65)

$Leverage_{it}$	-0.1045***	-0.2395***	-0.1071***	-0.3781***	-0.9853***	-0.3577***	-0.3670***	-0.7965***	-0.3691***
	(-17.82)	(-16.28)	(-8.26)	(-13.61)	(-13.90)	(-7.58)	(-14.26)	(-13.18)	(-9.28)
$Growth_{it}$	0.0247***	0.0158***	0.0194***	0.0877***	0.0478***	0.0612***	0.0836***	0.0593***	0.0674***
	(13.85)	(9.25)	(7.11)	(13.20)	(6.43)	(6.19)	(10.36)	(7.05)	(7.74)
$State_{it}$	-0.0031	-0.0123**	-0.0205***	-0.0051	-0.0410**	-0.0455**	0.0028	-0.0590**	-0.0406**
	(-1.56)	(-2.30)	(-3.45)	(-0.62)	(-2.19)	(-2.00)	(0.31)	(-2.41)	(-2.09)
$Topone_{it}$	0.0395	0.0658	-0.0508	0.1748*	-0.0169	-0.1376	0.1548	0.2354	-0.0414
	(1.45)	(1.20)	(-0.83)	(1.73)	(-0.08)	(-0.61)	(1.36)	(1.08)	(-0.25)
$Topone2_{it}$	-0.0152	-0.0525	0.0404	-0.1300	0.0325	0.0554	-0.0868	-0.1453	0.1349
	(-0.54)	(-0.96)	(0.77)	(-1.29)	(0.16)	(0.29)	(-0.76)	(-0.70)	(0.95)
$Top4\_1_{it}$	0.0045**	0.0023	0.0015	0.0167**	0.0005	-0.0009	0.0148	0.0219	0.0364
	(2.10)	(0.43)	(0.21)	(2.00)	(0.02)	(-0.04)	(1.60)	(0.96)	(1.64)
Ms_{it}	0.1121***	0.5084***	0.3302*	0.5218***	1.9990**	1.6604**	0.1701	0.5437	0.6465
	(2.82)	(2.68)	(1.69)	(2.69)	(2.50)	(2.20)	(0.77)	(0.55)	(1.05)
$Mcon_{it}$	-0.1209	-0.2918***	-0.0611	-0.7648	-1.2735***	-0.0432	-0.7219	-1.1495**	0.8812*
	(-1.18)	(-2.69)	(-0.45)	(-1.63)	(-2.64)	(-0.10)	(-1.44)	(-2.35)	(1.81)
Cons	-0.1874***	-0.5016***	-0.2645**	-0.8484***	-3.6144***	-1.4508***	-0.7911***	-2.1759***	-1.0532***
	(-7.29)	(-4.79)	(-2.50)	(-8.63)	(-7.62)	(-3.31)	(-7.28)	(-6.05)	(-3.48)
Obs	5238	5238	5238	5238	5238	5238	5238	5238	5238
R^2	0.3805	0.1122		0.2486	0.0990		0.2671	0.0700	

AR(1)			0.0000			0.0000			0.0000
AR(2)			0.6698			0.2421			0.1931
Sargan			0.2557			0.6448			0.4216

Notes: (1) Z-statistics are reported in brackets. P-values for AR (1), AR (2) and Sargan test are reported; (2) Time effect has been controlled in all regression models; (3)Industrial and regional effects are controlled in OLS and GMM regression models; (4) The Private is the base group in all models; (5) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator;(6) Instruments for the 'system-GMM' estimator are ROA,ROE, and ROS lagged t-3, and all other independent variables lagged t-2 to t-5 that are used as instruments in the first-differenced equations, with lagged first-differences of all independent variables as instruments in level equations; (7) * P-value≤10%,** P-value≤5%, and *** P-value≤1%.

Table 4.5 Instrument sets for Model 2

	Instruments for the first-differenced equations	Instruments for the level equations
Model 2.1	ROA lagged t-3, and all other independent variables lagged t-2 to t-5	lagged first-differences of all independent variables
Model 2.2	ROE lagged t-3, and all other independent variables lagged t-2 to t-5	lagged first-differences of all independent variables
Model 2.3	ROS lagged t-3, and all other independent variables lagged t-2 to t-5	lagged first-differences of all independent variables

Notes: Appropriate instrument sets are selected and justified using Sargan and serial correlation tests and at the same time, and the exogenous variables use themselves as instruments.

4.4.3. Categorising PLCs by the ultimate controller

In this section, I follow Chen *et al* (2009) to identify the ultimate controller by carefully tracing up the control chain. As I have discussed in Section 4.2, I group PLCs into five groups and argue that these distinct types of owners have different objectives and varying incentive structures, which would affect the corporate performance of PLCs they invest in. I will show that the conclusion drawn in section 4.2 could be confusing and misleading and then provide a valid conclusion by using the correct classification. To this end, the regression model has been modified as follows:

$$Performance_{i,t}=\sum_{j=1}^{p} \alpha_j\, Performance_{i,t-j}+\theta_1 \boldsymbol{SAMBCG}_{i,t}+\theta_2 \boldsymbol{SOELG}_{i,t}+$$

$$\theta_3 \boldsymbol{SOECG}_{i,t}+\theta_4 \boldsymbol{SAMBLG}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i+\varepsilon_{i,t} \quad (3)$$

Actually, I run following regression models for each dependent variable. I incorporate both the first and the second lags of dependent variables in models 3.1,

3.2 and 3.3.

$$ROA_{i,t}=\sum_{j=1}^{2}\alpha_j\, ROA_{i,t-j}+\theta_1 \boldsymbol{SAMBCG}_{i,t}+\theta_2 \boldsymbol{SOELG}_{i,t}+\theta_3 \boldsymbol{SOECG}_{i,t}+$$

$$\theta_4 \boldsymbol{SAMBLG}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i+\varepsilon_{i,t} \quad (3.1)$$

$$ROE_{i,t}=\sum_{j=1}^{2}\alpha_j\, ROE_{i,t-j}+\theta_1 \boldsymbol{SAMBCG}_{i,t}+\theta_2 \boldsymbol{SOELG}_{i,t}+\theta_3 \boldsymbol{SOECG}_{i,t}+$$

$$\theta_4 \boldsymbol{SAMBLG}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i+\varepsilon_{i,t} \quad (3.2)$$

$$ROS_{i,t}=\sum_{j=1}^{2}\alpha_j\, ROS_{i,t-j}+\theta_1 \boldsymbol{SAMBCG}_{i,t}+\theta_2 \boldsymbol{SOELG}_{i,t}+\theta_3 \boldsymbol{SOECG}_{i,t}+$$

$$\theta_4 \boldsymbol{SAMBLG}_{i,t}+\boldsymbol{C\beta}+\boldsymbol{B\gamma}+\boldsymbol{I\delta}+\tau_t+f_i+\varepsilon_{i,t} \quad (3.3)$$

Table 4.6 reports system GMM estimates for the regression model (3.1), model (3.2) and model (3.3). Regression results reported in Table 4.6 are robust. No matter which dependent variable is used, estimates are consistent and most estimates for key variables are consistent with those reported in Table 4.4.

The results reported in Table 4.6 reveal several interesting points. The positive and significant relation between PLCs' corporate performance and contemporary firm size($Lnsize_t$) suggests a positive role that the firm size can play in corporate governance. Also, this positive connection supports my decision to treat firm size as an endogenous variable, as better performance in contemporary years means more income which could in turn be reinvested by a PLC in itself to increase the asset base. Thus it could be possible to see a larger firm size at the year end. My results also confirm that better growth opportunities help PLCs perform well. According to Model (3.3), if a PLC has a one-standard-deviation increase in its growth ratio, it will experience a significant increase in corporate performance;

this increase is around 0.042. Given that the mean of the corporate performance (ROS) is 0.0322, it could be concluded that the relationship between PLCs' growth perspective and firm performance is both statistically and economically significant.

The negative and significant relationship between the leverage ratio ($Leverage_t$) and corporate performance could be due to several possibilities, such as: PLCs could use profits to repay debts, PLCs could reinvest profits in themselves to increase net assets, and positive performance could allow them to get the permit of additional share offering from the CSRC. All these possibilities would probably be reflected as a lower leverage ratio at the year end. According to Model (3.2), the leverage ratio coefficient is -0.2276 (z-statistic=-7.09) in column (6). Hence a one-unit (0.01) increase in a PLC's leverage ratio results in a decline of 0.0022 in corporate performance measured by ROS. The mean value for ROS is 0.0322, so a 0.01 increase in leverage ratio yields a 7% decline in corporate performance measured by ROS. The results are consistent with Tian and Entrin's (2008) argument that higher levels of leverage ratio means higher levels of debt, which will lead to more interest payouts at each period and thus lower corporate values.

There is a large body of literature claiming a non-linear relationship between ownership concentration and corporate performance. To test such a relationship, I proposed a hypothesis in Section 4.2 and expected the coefficient of *Topone* to be negative and significant, while *Topone2* is positive and significant if Hypothesis 1 holds that there exists a U-shaped relationship between ownership concentration and corporate performance. However, this U-shaped relationship is rather weak in

Table 4.6 GMM Estimation - Tracing the ultimate controller

	(3.1)			(3.2)			(3.3)		
Performance=	ROA			ROE			ROS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM
$Performance_{it-1}$	0.3110***	-0.0390	0.2962***	0.2917***	-0.1572***	0.2389***	0.2135***	-0.0901***	0.1745***
	(13.16)	(-1.59)	(22.53)	(5.20)	(-4.38)	(20.64)	(6.02)	(-2.74)	(17.00)
$Performance_{it-2}$	0.0244	-0.2110***	-0.0569***	-0.0540*	-0.3244***	-0.0990***	-0.0020	-0.2171***	-0.0585***
	(1.17)	(-9.89)	(-4.59)	(-1.71)	(-9.37)	(-10.09)	(-0.07)	(-7.74)	(-6.83)
$Boardsize_{it}$	0.0002	-0.0005	-0.0013*	0.0003	-0.0032	-0.0013	0.0016	0.0002	-0.0013
	(0.59)	(-0.76)	(-1.93)	(0.22)	(-1.24)	(-0.67)	(1.12)	(0.06)	(-0.60)
$Duality_{it}$	0.0003	0.0061	0.0019	-0.0048	0.0141	0.0281***	0.0092	0.0346*	0.0364***
	(0.10)	(1.44)	(0.69)	(-0.39)	(0.83)	(3.70)	(0.80)	(1.80)	(3.94)
$Boardshare_{it}$	0.0580	0.6049	0.1083	0.1725	1.6217	0.1284	-0.0884	2.0156	-0.7552
	(0.67)	(1.55)	(0.50)	(0.85)	(0.97)	(0.20)	(-0.31)	(1.18)	(-1.09)
$Independent_{it}$	0.0258**	0.0312**	0.0515***	0.0655*	0.0528	0.1472***	0.1437***	0.1275**	0.1778***
	(2.41)	(2.08)	(3.49)	(1.74)	(0.98)	(2.89)	(3.36)	(2.10)	(3.14)
$Lnsize_{it}$	0.0101***	0.0304***	0.0098***	0.0450***	0.1996***	0.0386***	0.0380***	0.1221***	0.0293***
	(8.95)	(5.88)	(3.57)	(10.24)	(8.39)	(4.15)	(7.76)	(6.99)	(3.53)
$Leverage_{it}$	-0.1040***	-0.2392***	-0.0870***	-0.3768***	-0.9852***	-0.2276***	-0.3657***	-0.7958***	-0.2871***
	(-17.73)	(-16.26)	(-9.77)	(-13.54)	(-13.92)	(-7.09)	(-14.18)	(-13.15)	(-9.76)
$Growth_{it}$	0.0246***	0.0159***	0.0263***	0.0877***	0.0479***	0.0751***	0.0834***	0.0593***	0.0761***
	(13.83)	(9.28)	(11.85)	(13.16)	(6.45)	(9.56)	(10.34)	(7.05)	(9.78)
$Topone_{it}$	0.0407	0.0683	-0.0025	0.1750*	-0.0278	-0.3293**	0.1596	0.2387	-0.0599
	(1.50)	(1.24)	(-0.05)	(1.72)	(-0.13)	(-2.27)	(1.40)	(1.09)	(-0.44)

$Topone2_{it}$	-0.0178	-0.0554	0.0295	-0.1311	0.0521	0.2702**	-0.0953	-0.1520	0.1603
	(-0.64)	(-1.01)	(0.73)	(-1.30)	(0.25)	(2.09)	(-0.83)	(-0.73)	(1.33)
$Top4\_1_{it}$	0.0043**	0.0023	0.0084*	0.0168**	0.0011	-0.0143	0.0142	0.0215	0.0246
	(1.98)	(0.43)	(1.76)	(1.98)	(0.05)	(-0.91)	(1.54)	(0.95)	(1.54)
Ms_{it}	0.1045***	0.5047***	0.1317	0.5159***	1.9909**	-0.1353	0.1559	0.5226	0.0799
	(2.58)	(2.67)	(0.83)	(2.62)	(2.49)	(-0.38)	(0.70)	(0.53)	(0.18)
$Mcon_{it}$	-0.1206	-0.2941***	-0.2158***	-0.7552	-1.2614***	-0.1660***	-0.7256	-1.1554**	0.4034
	(-1.17)	(-2.70)	(-2.84)	(-1.62)	(-2.63)	(-2.84)	(-1.45)	(-2.37)	(1.42)
$SOECG_{it}$	0.0027	-0.0061	-0.0071	0.0076	-0.0342	-0.0313	0.0152	-0.0473	-0.0050
	(0.97)	(-0.82)	(-1.15)	(0.68)	(-1.25)	(-1.63)	(1.27)	(-1.43)	(-0.26)
$SAMBCG_{it}$	-0.0035	-0.0100	-0.0057	-0.0051	-0.0284	-0.0028	-0.0007	-0.0466	0.0031
	(-1.07)	(-1.34)	(-0.82)	(-0.42)	(-1.12)	(-0.13)	(-0.06)	(-1.49)	(0.14)
$SOELG_{it}$	-0.0043*	-0.0120**	-0.0088*	-0.0139	-0.0496***	-0.0335**	0.0027	-0.0560**	-0.0353**
	(-1.78)	(-2.25)	(-1.93)	(-1.41)	(-2.59)	(-2.47)	(0.25)	(-2.28)	(-2.45)
$SAMBLG_{it}$	-0.0037*	-0.0139**	-0.0124***	-0.0025	-0.0355*	-0.0237*	0.0008	-0.0666**	-0.0436***
	(-1.71)	(-2.46)	(-2.73)	(-0.29)	(-1.76)	(-1.75)	(0.08)	(-2.56)	(-3.10)
Cons	-0.1740***	-0.5050***	-0.1865***	-0.8212***	-3.6079***	-0.7665***	-0.7593***	-2.1855***	-0.8293***
	(-6.57)	(-4.80)	(-2.88)	(-8.09)	(-7.61)	(-3.85)	(-6.72)	(-6.07)	(-4.11)
Obs	5238	5238	5238	5238	5238	5238	5238	5238	5238
R^2	0.3815	0.1127		0.2493	0.1002		0.2674	0.0698	
AR(1)			0.0000			0.0000			0.0000
AR(2)			0.4519			0.1328			0.1914
Sargan			0.3641			0.4879			0.1911

Notes: (1) Z-statistics are reported in brackets. P-values for AR (1), AR (2) and Sargan test are reported; (2) Time effect has been controlled in all regression models; (3)Industrial and regional effects are controlled in OLS and GMM regression models; (4) The Private is the base group in all models; (5) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator;(6) Instruments for the 'system-GMM' estimator are ROA,ROE, and ROS lagged t-3, and all other independent variables lagged t-2 to t-6 that are used as instruments in the first-differenced equations, with lagged first-differences of all independent

variables as instruments in level equations; (7) * P-value≤10%,** P-value≤5%, and *** P-value≤1%.

Table 4.7 Instrument sets for Model 3

	Instruments for the first-differenced equations	Instruments for the level equations
Model 3.1	ROA lagged t-3, and all other independent variables lagged t-2 to t-5	lagged first-differences of all independent variables
Model 3.2	ROE lagged t-3, and all other independent variables lagged t-2 to t-5	lagged first-differences of all independent variables
Model 3.3	ROS lagged t-3, and all other independent variables lagged t-2 to t-5	lagged first-differences of all independent variables

Notes: Appropriate instrument sets are selected and justified using Sargan and serial correlation tests and at the same time, and the exogenous variables use themselves as instruments.

my sample.

As for board characteristics, the positive and significant coefficients of independent directors could lead to the conclusion that the presence of independent directors does have some positive effects on corporate governance in China. For example, for Model (3.1), a 10% increase in the portion of independent directors sitting on the board would lead to an improvement in a PLC's corporate performance (ROA) of approximately 20%. There is little evidence to support Rechner and Dalton (1991), even though the signs of the coefficients of *Duality* are inconclusive in three models. Furthermore, there is no strong evidence to support the idea that there is a connection between directors' ownership and corporate performance at Chinese PLCs. As far as the results are concerned, independent variables regarding board characteristics lack sufficient explanatory power.

Table 4.6 shows a more precise image of the influence that different types of ultimate controller may have on corporate performance. There are tremendous differences in operating performance among the five groups after controlling for the lagged performance, internal financial factors and board characteristics. As shown in Table 4.6, the negative and significant coefficients of SOELG and SAMBLG suggest that state owners, if seen as a group, do not perform as well as their private rivals. The explanation could be that private investors are more likely to closely monitor firms' management, and in this sense the classic agency costs will be significantly reduced.

Table 4.8 illustrates a much clearer image that PLCs controlled by SOECGs and the SAMBCG are found to be almost as good as those privately controlled ones. Moreover, the SAMBCG is statistically different from SAMBLGs, and the difference in corporate performance between SOECGs and SOELGs is statistically significant. Interestingly, bureaucratic SAMBs are not the worst, as was expected. One possible reason could be that monitoring from central government and its ministries as well as the public does help improve the SAMBCG's management efficiency, which could in turn enhance the corporate performance of PLCs under its control.

Table 4.8 Test of equality in coefficients (Wald-statistics[24])

	Model 3.1	Model 3.2	Model 3.3
SAMBLG VS.SOECG	4.32**	3.19*	4.80**
SAMBLG VS. SAMBCG	3.91**	5.65**	2.19
SAMBLG VS. SOELG	2.20	1.57	0.82
SAMBLG VS. Private	7.48***	3.05*	9.60***
SOECG VS. SAMBCG	0.14	0.06	0.51
SOECG VS.SOELG	4.52**	5.45**	3.62*
SOECG VS. Private	1.32	2.64	0.07
SAMBCG VS.SOELG	4.01**	2.89*	2.01
SAMBCG VS. Private	0.67	0.02	0.02
SOELG VS. Private	3.73*	6.12**	5.98**

Notes: * P-value≤10%, ** P-value≤5%, and *** P-value≤1%.

4.4.4. Linear splines regression

In the previous section, the results do not strongly support a U-shaped non-linear relationship between corporate performance and ownership concentration. In order to capture the non-linear features of such a relationship in China's PLCs, instead of including quadratic terms of ownership concentration in regression

---

[24] To test a set of linear or nonlinear hypothesis---$\mathbf{H_0}$: $\mathbf{R}(\boldsymbol{\theta}) = \mathbf{q}$, after fitting a model, I use the Wald test statistics: $W=\{\mathbf{R}(\hat{\boldsymbol{\theta}})-\mathbf{q}\}'(\mathbf{GVG}')^{-1}\{\mathbf{R}(\hat{\boldsymbol{\theta}})-\mathbf{q}\}$, which under $\mathbf{H_0}$, in large samples, has a *Chi*-squared distribution with degrees of freedom equal to the number of equations in $\mathbf{R}(\hat{\boldsymbol{\theta}})-\mathbf{q}=0$, i.e. the number of restrictions. $\hat{\boldsymbol{\theta}}$ is the $1\times k$ estimated coefficient vector. $\mathbf{V}$ is the $k\times k$ estimated asymptotic covariance matrix, and $\mathbf{V}=Est.Asy.Var[\hat{\boldsymbol{\theta}}]$. $\mathbf{G}$ is the derivative matrix of $\mathbf{R}(\hat{\boldsymbol{\theta}})$ with respect to $\hat{\boldsymbol{\theta}}$. $\mathbf{R}$ is a function returning a $j\times 1$ vector.

models, I opt for a more precise method - the linear splines method. Linear splines allow estimating of the relationship between y (i.e. the proxies of firm performance, such as ROA, ROE, and ROS in this study) and x (*Topone*) as a piecewise linear function, which is a function composed of linear segments - straight lines. One linear segment represents the function for values of x below q0, another linear segment handles values between q0 and q1, and so on. The linear segments are arranged so that they join at the knots (q0, q1, q2...).

Based upon previous works[25] that provide an empirical direction for the partition of ownership concentration, I set the knots at the 25th, 50th, and 75th percentiles of the *Topone*, thus spliting the *Topone* into four segments (*Top1, Top2, Top3* and *Top4*) which can be described as follows:

$$Performance_{i,t} = \sum_{j=1}^{p} \alpha_j Performance_{i,t-j} + \rho_1 \boldsymbol{Top1}_{i,t} + \rho_2 \boldsymbol{Top2}_{i,t} + \rho_3 \boldsymbol{Top3}_{i,t} + \rho_4 \boldsymbol{Top4}_{i,t} + \boldsymbol{C\beta} + \boldsymbol{B\gamma} + \boldsymbol{I\delta} + \tau_t + f_i + \varepsilon_{i,t} \quad (4)$$

Actually, I run following regression models for each dependent variable. I incorporate both the first and the second lags of dependent variables as explanatory variables in all three models.

$$ROA_{i,t} = \sum_{j=1}^{2} \alpha_j ROA_{i,t-j} + \rho_1 \boldsymbol{Top1}_{i,t} + \rho_2 \boldsymbol{Top2}_{i,t} + \rho_3 \boldsymbol{Top3}_{i,t} + \rho_4 \boldsymbol{Top4}_{i,t} + \boldsymbol{C\beta} + \boldsymbol{B\gamma} + \boldsymbol{I\delta} + \tau_t + f_i + \varepsilon_{i,t} \quad (4.1)$$

$$ROE_{i,t} = \sum_{j=1}^{2} \alpha_j ROE_{i,t-j} + \rho_1 \boldsymbol{Top1}_{i,t} + \rho_2 \boldsymbol{Top2}_{i,t} + \rho_3 \boldsymbol{Top3}_{i,t} + \rho_4 \boldsymbol{Top4}_{i,t} + \boldsymbol{C\beta} +$$

[25] See Bai *et al* (2004),Chen *et al* (2007) and Tian and Estrin (2008).

$$\boldsymbol{B\gamma} + \boldsymbol{I\delta} + \tau_t + f_i + \varepsilon_{i,t} \quad (4.2)$$

$$ROS_{i,t} = \sum_{j=1}^{2} \alpha_j ROS_{i,t-j} + \rho_1 \boldsymbol{Top1}_{i,t} + \rho_2 \boldsymbol{Top2}_{i,t} + \rho_3 \boldsymbol{Top3}_{i,t} + \rho_4 \boldsymbol{Top4}_{i,t} + \boldsymbol{C\beta} + \boldsymbol{B\gamma} + \boldsymbol{I\delta} + \tau_t + f_i + \varepsilon_{i,t} \quad (4.3)$$

Segment 1: 0<Top1<25%. In this segment the alignment effects should be expected such that corporate performance improves with the increase of the ownership concentration. A certain level of ownership concentration can at least partially solve the classic agency conflicts between management and shareholders. Bai *et al* (2004) claim that the increase of ownership concentration from a low level can help deal with the free-rider problem. Furthermore, it could be argued that the presence of block shareholders can reduce agency costs caused by the classic agency problem (Shleifer and Vishny, 1986). Hence a build-up of ownership concentration from a low level can help address the classic agency conflicts, which would in turn increase a firm's corporate value.

Segment 2: 25%≤Top2<50%. In this segment the entrenchment effects should be expected such that corporate performance decreases with the increase of the ownership concentration. Through the pyramidal structure or cross-shareholding, the voting rights of the controlling shareholder could differ dramatically from her/his cash flow rights. "As ownership gets beyond a certain point, the large owners gain nearly full control and are wealthy enough to prefer to use firms to generate private benefits of control that are not shared by minority shareholders" (Shleifer and Vishny, 1997, p.759). The further increase of ownership concentration in this segment might provide the controlling shareholder of a company with more incentive to expropriate minority shareholders, which would result in reduced

corporate value.

Segment 3: $50\% \leq \text{Top3} < 75\%$. In this segment I would expect a positive relationship again, as the ownership concentration goes well beyond 50 percent and the incentive for tunneling will be removed. Bai *et al* (2004) argue that the relationship between firm performance and ownership concentration is complicated, and there are positive as well as negative effects on firm performance that are associated with different levels of ownership concentration. Furthermore, they argue that the first positive effect of ownership concentration starts to appear when ownership starts out being very diffused, and the emergence of block shareholding may help minimise the free-rider problem. The second positive effect becomes significant when the degree of concentration is very high, and the 'alignment' effect starts to remove the 'tunneling' problem. In the spirit of Bai *et al* (2004), a positive relationship between ownership concentration and firm performance would be expected in this segment.

Segment 4: $75\% \leq \text{Top4} \leq 100\%$. In this segment the interests of the controlling shareholder of a firm should be well aligned with those of minority shareholders, with many agency problems being well addressed. However, as ownership concentration approaches 100 percent, the benefits of public listing, such as risk sharing and equity financing opportunities, may gradually fade away. Chen *et al* (2007) argue that poor liquidity, lack of monitoring, and excluding professionals in this segment cause the relationship to become negative. In this sense, a negative relationship between ownership concentration and firm performance might be found in this segment.

Table 4.9 reports the system GMM estimates for the linear splines regression, with estimates for key variables being consistent with those reported in Table 4.4 and Table 4.6. It is observed that the firm performance changes are associated with the changes of ownership concentration across four segments, and have expected signs in each segment, after controlling for other factors. The coefficients of the percentage ownership of the largest shareholder are positive and significant in segment 1, negative and significant in segment 2, positive and significant in segment 3 and negative again in segment 4, which suggests an 'M-shaped' relationship between corporate performance and ownership concentration proxied by the percentage of shares held by the largest shareholder. However, such an "M-shaped" relationship between ownership concentration and firm performance is moderate according to my results reported in Table 4.9, as the relevant coefficients of top1, top2, top3 and top4 are not significant across all the different measures of performance.

This 'M-shaped' relationship also provides some consistent but relatively weak support to Hypothesis 1. Bai *et al* (2004, p.604) argue that "at first, increased ownership concentration from a low level addresses the free-rider problem among shareholders so that it has a positive effect. However, a further increase in ownership concentration has a negative effect if it reduces the constraint on tunneling from other shareholders. Finally, as ownership concentration approaches one-hundred percent, the effect becomes positive again.....In China, the second effect dominates and the first effect is negligible. Hence, we expect to find a U-shaped relationship between firm value and ownership concentration among Chinese firms". The estimates of ownership concentration reported in Table 4.9

are consistent with their argument, although they neglect the 'efficient losses' in segment 4. Hence, if I ignore the positive effect in segment 1 and the negative effect in segment 4, my results could be considered to be supportive of a U-shaped relationship between firm value and ownership concentration.

Table 4.9 Linear splines regression

	(4.1)			(4.2)			(4.3)		
Performance=	ROA			ROE			ROS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM
$Performance_{it-1}$	0.3114***	-0.0369	0.2363***	0.1923***	-0.1551***	0.1456***	0.2132***	-0.0878***	0.1098***
	(13.21)	(-1.52)	(8.25)	(5.23)	(-4.31)	(8.35)	(6.01)	(-2.68)	(9.18)
$Performance_{it-2}$	0.0250	-0.2112***	-0.0319	-0.0540*	-0.3231***	-0.1348***	-0.0027	-0.2166***	-0.0562***
	(1.20)	(-9.95)	(-1.40)	(-1.71)	(-9.34)	(-9.85)	(-0.09)	(-7.76)	(-6.21)
$Boardsize_{it}$	0.0002	-0.0005	-0.0027*	0.0002	-0.0033	-0.0074**	0.0017	0.0002	-0.0064**
	(0.43)	(-0.76)	(-1.76)	(0.13)	(-1.28)	(-2.56)	(1.21)	(0.06)	(-2.56)
$Duality_{it}$	0.0001	0.0059	0.0094	-0.0048	0.0146	0.0369**	0.0085	0.0337*	0.0415***
	(0.03)	(1.36)	(1.03)	(-0.40)	(0.85)	(2.01)	(0.75)	(1.75)	(2.85)
$Boardshare_{it}$	0.0876	0.6348	0.8723*	0.2345	1.7213	-0.3434	-0.0792	2.1088	0.1196
	(1.01)	(1.59)	(1.75)	(1.17)	(1.02)	(-0.27)	(-0.28)	(1.22)	(0.14)
$Independent_{it}$	0.0256**	0.0329**	0.0365	0.0644*	0.0584	0.0941	0.1402***	0.1347**	0.2333***
	(2.39)	(2.16)	(0.89)	(1.70)	(1.08)	(1.29)	(3.29)	(2.20)	(3.29)
$Lnsize_{it}$	0.0098***	0.0298***	0.0163***	0.0454***	0.1980***	0.0751***	0.0383***	0.1184***	0.0339***
	(8.70)	(5.83)	(2.66)	(10.17)	(8.46)	(4.67)	(7.79)	(6.77)	(3.43)
$Leverage_{it}$	-0.1040***	-0.2399***	-0.0902***	-0.3780***	-0.9864***	-0.2758***	-0.3682***	-0.7982***	-0.3424***

	(-17.74)	(-16.26)	(-4.21)	(-13.55)	(-13.90)	(-5.54)	(-14.29)	(-13.21)	(-10.13)
$Growth_{it}$	0.0248***	0.0162***	0.0389***	0.0879***	0.0493***	0.0590***	0.0833***	0.0613***	0.0773***
	(13.92)	(9.42)	(5.72)	(13.32)	(6.66)	(6.30)	(10.43)	(7.21)	(10.71)
$Top1_{it}$	0.0860**	0.0848	0.2632**	0.3045**	0.1281	0.3660	0.2791*	0.3084	0.1037
	(2.34)	(1.22)	(2.06)	(2.22)	(0.48)	(1.42)	(1.71)	(0.94)	(0.59)
$Top2_{it}$	-0.0742*	-0.0674	-0.3032**	-0.2806*	-0.1378	-0.5521**	-0.2219	-0.1894	-0.1709
	(-1.80)	(-0.94)	(-2.34)	(-1.81)	(-0.51)	(-2.03)	(-1.23)	(-0.55)	(-0.97)
$Top3_{it}$	0.0157	0.0108	0.0192	0.0410	0.1135	0.1116	0.0145	-0.0080	0.1870**
	(0.76)	(0.31)	(0.44)	(0.54)	(0.85)	(1.11)	(0.19)	(-0.07)	(2.30)
$Top4_{it}$	0.5809*	-1.2543	-0.0438	-0.4200	-4.8717	-6.0369***	0.2161	-2.2267	-0.2363
	(1.79)	(-1.18)	(-0.05)	(-0.47)	(-1.08)	(-2.95)	(0.23)	(-0.65)	(-0.19)
$Top4\_1_{it}$	0.0047**	0.0038	-0.0080	0.0172**	0.0073	-0.0354	0.0153*	0.0307	0.0194
	(2.19)	(0.71)	(-0.82)	(2.08)	(0.35)	(-1.55)	(1.67)	(1.33)	(1.35)
Ms_{it}	0.1092***	0.5167***	0.4778	0.5125***	2.0305**	0.8079	0.1712	0.5827	0.3460
	(2.76)	(2.75)	(1.40)	(2.65)	(2.55)	(1.14)	(0.77)	(0.59)	(0.65)
$Mcon_{it}$	-0.1222	-0.2986***	-0.5499*	-0.7637	-1.2931***	0.0945	-0.7176	-1.1867**	0.2613
	(-1.19)	(-2.75)	(-1.96)	(-1.63)	(-2.69)	(0.23)	(-1.43)	(-2.42)	(0.65)
Cons	-0.1971***	-0.5091***	-0.3068**	-0.8917***	-3.6477***	-1.5081***	-0.8319***	-2.1878***	-0.9998***
	(-7.30)	(-4.79)	(-2.22)	(-8.63)	(-7.68)	(-3.96)	(-7.28)	(-5.91)	(-4.04)
Obs	5238	5238	5238	5238	5238	5238	5238	5238	5238
R^2	0.3811	0.1121		0.2490	0.0994		0.2674	0.0725	

AR(1)			0.0000			0.0000			0.0000
AR(2)			0.4643			0.2659			0.1456
Sargan			0.6281			0.7596			0.5127

Notes: (1) Z-statistics are reported in brackets. P-values for AR (1), AR (2) and Sargan test are reported; (2) Time effect has been controlled in all regression models; (3)Industrial and regional effects are controlled in OLS and GMM regression models; (4) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator;(5) Instruments for the 'system-GMM' estimator are ROA,ROE, and ROS lagged t-3, and all other independent variables lagged t-2 to t-6 that are used as instruments in the first-differenced equations, with lagged first-differences of all independent variables as instruments in level equations; (6) * P-value≤10%,** P-value≤5%, and *** P-value≤1%.

Table 4.10 Instrument sets for Model 4

	Instruments for the first-differenced equations	Instruments for the level equations
Model 4.1	ROA lagged t-3, and all other independent variables lagged t-2 to t-6	lagged first-differences of all independent variables
Model 4.2	ROE lagged t-3, and all other independent variables lagged t-2 to t-6	lagged first-differences of all independent variables
Model 4.3	ROS lagged t-3, and all other independent variables lagged t-2 to t-6	lagged first-differences of all independent variables

Notes: Appropriate instrument sets are selected and justified using Sargan and serial correlation tests and at the same time, and the exogenous variables use themselves as instruments.

4.4.5. Robustness check

To check whether my results are robust to alternate measures of some key variables, a series of robustness tests have been conducted and results are reported in the Appendix. To test if the estimation results generated by models (2.1), (2.2) and (2.3) are consistent for alternative measures of a firm's size and leverage ratio, I calculate a firm's size as number of employees and leverage ratio as a firm's total liability over total assets minus total liability. The results are reported in Table A4.2. Similar tests are carried out for models (3.1), (3.2), (3.3), (4.1), (4.2) and (4.3) and the corresponding results are given in Table A4.3 and columns (1), (2) and (3) of Table A4.4. The results have clearly shown that my main findings are robust to these alternate measures. In addition, as a comparison for the results given in Table 4.9, I also experiment with alternative cut-off points for the measure of ownership concentration. Columns (4), (5) and (6) of Table A4.4 report the results by setting the cut-off points at 15%, 30% and 50%, while columns (7), (8) and (9) show the

results given by setting the cut-off points at 30%, 50% and 70%. The overall relationship between ownership concentration and firms' performance seems quite moderate according to my results.

4.5. Conclusion

This study documents that the percentage of outstanding shares held by the largest shareholder and the type of ultimate controller behind the largest shareholder are strongly associated with Chinese PLCs' corporate value, after controlling other possible determinants of firm performance. Using an unbalanced panel that consists of 7324 Chinese PLCs' firm-year observations from 2000 through 2007 and applying the consistent system GMM estimation to it, I find that my findings suggest an 'M-shaped' relationship between ownership concentration and firm value. Such a non-monotonic relationship demonstrates the possibility of finding two optimal levels of ownership concentration. One of these two optimal levels should lie at around 25 per cent of ownership concentration, while the other one lies at around 75 per cent.

Moreover, my findings challenge the classification of PLCs adopted by most prior studies and demonstrate how this may lead to erroneous conclusions. In categorising PLCs according to the types of the ultimate controller, my results contrast with those works and show that state ownership may not always reduce corporate value, and PLCs controlled by SOECGs and the SAMBCG could perform almost equally well as those controlled by private investors. My results also suggest that if the Chinese government wants to further the privatisation of

state ownership in the next phase of economic reform, it should seriously consider the possibility of relinquishing its control on those underperforming PLCs whose ultimate controllers are SOELGs and SAMBLGs.

CHAPTER FIVE
CORPORATE CASH HOLDINGS OF CHINESE PUBLICLY LISTED COMPANIES

5.1. Introduction

In a world of perfect capital markets, firms' cash holdings would be an irrelevant issue in corporate day-to-day operations. Since there is no liquidity premium in such a world, firms can easily adjust their holdings of liquidity assets at zero cost. Moreover, they can raise external funds at fair prices to finance investment projects whenever their cash flows are low. However, such a perfect world, in reality, does not exist, and it could be costly for firms to adjust their levels of cash holdings as well as raising external funds. In this case, if facing a shortage of internal resources, firms have to raise funds in the capital markets by, for example, selling existing assets, cutting dividends and investment or issuing new debt and/or equity. It is argued that there are costs to both purchasing and selling financial and real assets, and the costs have both fixed and variable components. The fixed cost occurs at a fixed rate in every single transaction, while the variable cost is assumed to be proportional to the amount of funds raised (Opler *et al.*, 1999; Ozkan and Ozkan, 2004).

Arguably, in imperfect capital markets, firms may have strong incentives to

maintain internal financial flexibility by holding sufficient cash, as cash could provide low cost financing for them. Keynes (1936) suggests that firms have a transaction motive for holding cash due to the cost of converting cash substitutes into cash. However, there are also potential costs associated with corporate cash holdings. In accordance with the trade-off theory (see Opler *et al.*, 1999 and Dittmar *et al.*, 2003 for theoretical analysis), firms always balance the benefits and costs of holding cash to determine the target level of cash reserves. Once the actual cash holdings deviate from the target level, they will start adjusting towards the target cash reserves (see, for example, Opler *et al.*, 1999). The most direct cost of holding cash is the opportunity cost, which is the forgone return arising from the low return on liquid assets (Opler *et al.*, 1999). In addition, the adverse effects of retaining a large amount of cash would also arise from the existence of agency conflicts in modern firms, which is detrimental to shareholders' value. Jensen (1986) argues that the agency conflicts between shareholders and the management could be most devastating when firms have large free cash flows.

Meanwhile, the benefits of holding cash could arise from a number of sources. Firstly, more cash reserves may help firms to not only reduce their reliance on external financing, but also to reduce the costs of financing, relieving firms' financial constraints to a large extent (Almeida *et al.*, 2004). Secondly, firms with high cash reserves may have a strategic advantage in competitive product markets, as indicated by Haushalter *et al* (2007) and Fresard (2008). Last but not least, firms with ample cash reserves are less likely to have to forgo profitable net present value (NPV) projects (Almeida *et al.*, 2004). Due to the existence of asymmetric information between firms and investors in capital markets, it could be costly for

firms to raise external funds to finance their projects (Ozkan and Ozkan, 2004). Myers and Majluf (1984) suggest that firms prefer internal financing to external financing as a consequence of capital market asymmetric information in capital markets. Hence, firms with greater growth opportunities would hold greater amounts of cash with hopes of not passing up valuable investment opportunities.

The investigation into firms' cash holdings has recently attracted a great deal of attention from both academics and practitioners. An important strand of this ever growing literature is aimed at uncovering the determinants of corporate cash holdings[26]. For a large panel of industrial firms in the US over the period 1975 to 1994, Kim *et al* (1998) found that the optimal level of holding liquidity assets would increase in response to higher costs of external financing, more volatile future cash flows and greater growth opportunities. Opler *et al* (1999) tested a similar sample consisting of publicly traded US firms in the period 1971 to 1994. They argue that large firms and firms with high credit ratings, which have better access to the capital markets, are more likely to hold lower cash reserves. More recently, given mounting concerns regarding the existence of agency problems in firms around the world, more regard has been paid to the investigation of the relationship between agency conflicts and corporate cash holdings. For example, Ozkan and Ozkan's (2004) study of a panel of UK firms provides evidence of a significant non-monotonic relationship between managerial ownership and corporate cash holdings. They also argue that firms whose ultimate controllers are families would hold significantly higher ratios of total cash and equivalent items to

[26]The other important strand focuses on the relationship between cash holdings and corporate performance (see, for example, Harford, 1999; Pinkowitz *et al.*, 2006).

total assets than those non-family controlled ones. Pinkowitz *et al* (2006) provide evidence for the agency theories which predict that the value of corporate cash holdings is less in countries with poor investor protection. They suggest that it is because that laws and their enforcement in those countries could not provide effective protection against the expropriation of minority investors by controlling shareholders, which would lead to lower corporate values. Based on Opler *et al*'s (1999) work, Dittmer and Mahrt-Smith (2007) argue that poorly governed firms tend to dissipate cash quickly in ways that could significantly decrease shareholders' value. However, such a negative impact of large cash holdings can be effectively cancelled out in firms which are well governed.

Though the ever growing literature about corporate cash holdings has improved our knowledge extensively, it is mainly derived from data from developed countries. In contrast, research regarding corporate cash holdings in China remains inadequate. Distinct from previous studies, this chapter is intended to contribute to the literature on corporate cash holding mainly in two aspects. Firstly, this chapter explicitly investigates whether the identity of the ultimate controller of Chinese publicly listed companies (PLCs) has any impact on their cash holding levels, with special regard being given to the unique characteristics of the Chinese stock market. Corporate cash holdings are one main source of agency conflicts, as suggested by prior studies (see, for example, Dittmar *et al.*, 2003, Pinkowitz *et al.*, 2006, and Kalcheva and Lins, 2007), and it is argued that agency problems could be a possible reason for firms to hold excessive amounts of cash. Jensen's (1986) free cash flow hypothesis stresses the agency costs of free cash flow arising out of the conflicts between shareholders and the management. Consistent with the 'classic'

agency theory, private firms in China, with clearly-defined property rights and better-aligned interests between shareholders and the management, should be more effective in reducing possible agency costs than those controlled by the state. In this sense, it would be rare that one might see a privately-controlled firm maintaining excessive cash balances. However, with respect to corporate cash holdings, such an argument might not hold in China, given the state's dominant role in the economy and the presence of the 'soft-budget' constraints for the state-controlled firms. Rather, the cash holding behaviour of Chinese PLCs could be heavily influenced and shaped by these salient characteristics in the Chinese stock market. Due to the long-accused 'soft-budget' constraints, PLCs that are ultimately controlled by the state are less financially constrained in the way that they have much better access to credit in most state-owned commercial banks (Wei, 2010). Therefore, these PLCs may face less borrowing constraints and lower costs of external financing, and it is highly likely that they would have lower ratios of liquidity assets to total assets relative to the privately-controlled PLCs. A negative relationship between cash holdings and state-controlled PLCs might therefore be observed. Another explanation for this negative relationship could be that private owners as the controlling shareholders may have incentives to over-invest in liquid assets in order to generate private benefits at the expense of minority shareholders, and these potential agency conflicts of interest between the controlling shareholder and minority shareholders have already been emphasised by recent studies (see, for example, La Porta *et al.*, 1998, 1999, 2000a, b).

There have been several existing studies providing empirical evidence to support the existence of the optimal target level for corporate cash holdings of firms in

developed economies (see, for example, Kim *et al.*, 1998, Opler *et al.*, 1999, Ozkan and Ozkan, 2004, and Dittmar and Mahrt-Smith, 2007). However, there is little if any evidence on the optimal cash holding level in China. Utilising the partial target-adjustment model, I investigate the dynamic adjustment processes of cash holdings of Chinese PLCs based on the view[27] that market imperfections such as adjustment and transaction costs can cause delays for firms in adjusting their cash holdings. Hence, the second contribution of this chapter lies in the exploitation of the dynamic adjustment behaviour of the corporate cash holdings of Chinese PLCs, which especially focuses on investigating whether there is any difference in the adjustment speed for different ultimate controllers. It is argued that a firm's ability to access external funds could play an important role in shaping its cash holding adjustment behaviour. In China, external borrowings are mainly referred to as bank debts. For PLCs with private controlling shareholders, borrowings from banks are subject to rigid monitoring from debt-issuing banks, generally via stringent debt provisions. In contrast, backed up by the state, state-controlled PLCs, if necessary, can adjust their cash holdings fairly easily by accessing external finance at favourably low costs, mainly from state-owned banks. Since carrying liquid assets and adjusting cash holding levels both involve costs, this would, in turn, enable these state-controlled PLCs to maintain lower cash balances, and to appear more reluctant to adjust their cash holdings, as compared with privately-controlled PLCs. Moreover, it is important to note that maintaining target cash holding levels, which are mainly derived from the transaction cost motive and the precautionary motive, could have strategic meanings for firms. It is possible that PLCs with private

[27] See Kim *et al.*, 1998; Opler *et al.*, 1999; Ozkan and Ozkan, 2004, for theoretical analysis.

owners are more efficient in the sense that they tend to have faster cash holding adjustment speed, so as to lower their financial risks and grab value-enhancing investment opportunities. Therefore, with the same extent of deviation from the target cash holding level, privately-controlled PLCs might be more active in making adjustments towards the target level.

The endogeneity problem in the empirical analysis of corporate cash holdings will be carefully addressed, as suggested by Ozkan and Ozkan (2004). They argue that it is important to control the endogenity problem in this context for mainly two reasons: "Firstly, it is highly likely that observable as well as unobservable shocks affecting cash holdings of firms can also affect some of the firm-specific characteristics such as leverage and market-to-book ratios. Second, it is possible that observed relations between cash and its potential determinants reflect the effects of cash on the latter rather than vice versa" (Ozkan and Ozkan, 2004, p.2105).

The rest of this chapter is organised as follows: Section 5.2 provides an overview of theoretical issues relevant to corporate cash holdings. Section 5.3 describes the dataset and the variable constructions. Section 5.4 presents the results. Section 5.5 concludes the chapter.

5.2. Corporate cash holdings

The purpose of this section is to provide a brief overview of the theoretical issues relevant to corporate cash holdings. The literature about target (or optimal) cash

holdings is based on the premise that if there are market imperfections then there are various reasons for firms to hold cash. In a world where managers always maximise shareholders' wealth, corporate cash holdings should be at a level such that the marginal costs equal the marginal benefits of holding cash. This is the trade-off theory of corporate cash holdings, which elaborates both benefits and costs of firms holding cash. The obvious costs of holding liquid assets are costs of carry, while the two main benefits that have been discussed in the existing literature arise from a transaction costs motive and a precautionary motive.

In this chapter I intend to first briefly discuss the trade-off theory and then move on to provide a description of the competing theory to the trade-off theory, i.e. the financing hierarchy theory/pecking order theory. Previous studies have suggested that corporate governance, as an important issue in the discussion of corporate cash holdings, should be taken into consideration at all times (see, for example, Opler *et al.*, 1999, Ozkan and Ozkan, 2004, Dittmar *et al.*, 2003, Pinkowitz *et al.*, 2006 and Harford *et al.*, 2008). This section also goes over relevant corporate governance issues that could possibly help explain corporate cash reserves in China.

5.2.1. Transaction costs motive

It is argued that the normal (or optimal) cash holdings could be seen as a result of the trade-off between benefits and costs of retaining large cash reserves within firms. The benefits of holding cash balances stem from mainly two motives. The first is the transaction costs motive, which means that a firm facing a shortage of internal resources can raise outside funds by liquidating its near cash and/or other assets, which would involve a great amount of costs in imperfect markets as

opposed to perfect markets[28]. Opler *et al* (1999) suggest that unless the firm can liquidate cash substitutes into cash at low cost, it may prefer to resort to outside funds in capital markets. However, it is pointed out by Ozkan and Ozkan (2004) that it is likely for firms to incur transaction costs in the asset liquidating process, and the costs normally involve both fixed and variable components. Consequently, the costs, in particular the fixed costs of assessing capital markets, could force firms to refrain from frequently raising outside funds. Considering the effect of transaction costs, one would expect firms to maintain cash balances so as to reduce these costs.

5.2.2. Information asymmetries, agency costs of debt and precautionary motive

The second motive of holding cash is the precautionary (speculative) motive, which suggests two particular concerns of firms. The first is about the expectation of future investment opportunities, while the second concerns the corporate cash flow volatility in the future. In addition, the precautionary (speculative) motive points directly to the costs arising from the information asymmetries between the management of the firm and outside investors (Myers and Majluf, 1984). Given such asymmetric information, "outsiders want to make sure that the securities they purchase are not overpriced, and consequently discount them appropriately" (Opler *et al.*, 1999, p.10). Although firms can have access to the capital markets, the existence of the information asymmetries could make external financing extremely costly. In reality, outside investors may require so large a discount that the

[28] See Modigliani and Miller, 1958.

management may find it too costly to finance projects by raising outside funds and choose to reduce investment instead. When facing value increasing growth options if taken, firms may have strong incentives to hold more cash as a buffer against cash shortfalls. Firms with such investment opportunities could do so in an attempt to make it less likely that they will have to pass up some positive NPV projects. It is also important to note that the information asymmetries might vary over time, as suggested by Opler *et al* (1999), such that harmless asymmetric information at one point in time could later mutate into an obstacle to firms' external financing, and vice versa. Myers and Majluf (1984) argue that due to the high costs of external financing caused by the information asymmetries, stockholders could be better off if firms build up financial slack to undertake good investment opportunities during the periods when the management has little or no information advantage. Hence firms may find it valuable to be good at stacking up financial slack in their day-to-day operations. Ozkan and Ozkan (2004) claim that firms with greater growth opportunities are encouraged to carry more cash and marketable securities to avoid possible future cash shortfalls.

Besides the asymmetric information that could increase the cost of outside funds, the precautionary motive also stresses the role of agency costs of debt. These agency costs arise when the interests of the shareholders are not consistent with those of the debtholders. Because of these costs, firms may choose not to raise external funds and pass up some valuable projects that may only benefit debtholders but not shareholders, which is the underinvestment problem pointed out by Myers (1977). However, firms with greater growth opportunities want to avoid situations where the agency costs of debt are prohibitively expensive so that

they cannot raise external financing to invest in rewarding projects. Obviously, one way to do so is to maintain large cash balances in firms.

5.2.3. The financing hierarchy theory

The financing hierarchy theory/pecking order theory of Myers (1984) states that in the presence of asymmetric information between firms and outside investors, it is likely that firms follow a hierarchy in financing their investments in the sense that they would finance projects primarily with internal resources, then with debt and finally with equity. Under the financing hierarchy theory, there is no optimal level of cash holdings for a firm and cash is merely the opposite side of the debt. Corporate cash holdings are simply the outcome of the investment and financing decisions made by the firm (Dittmar *et al.*, 2003). Thus, when current cash flows are adequate enough to finance investments, firms will pay back debt and accumulate cash. When current cash flows are insufficient to finance current investments, firms use their accumulated cash holdings, and then issue debt if needed.

Though the financing hierarchy theory is the popular competing theory to the trade-off theory, the distinction between them is not as sharp as people might expect, and many variables that are correlated with cash holdings are also used in the trade-off theory. Previous studies suggest that both views are able to help explain the determinants of corporate cash holdings (see, for example, Ferreira and Vilela, 2004; Saddour, 2006). The major difference between these two theories is that the trade-off theory expects a positive relationship between investment (capital expenditures) and cash holdings, while the financing hierarchy theory predicts a

negative relationship, with many other predictions made by the two views being the same. I will provide a more detailed description of predictions implied by the two theories in the following section.

5.2.4. Agency costs of managerial discretion and board structure

A firm where the management maximises shareholders' wealth should set the firm's cash holdings at a level such that the marginal benefit of cash holdings equals the marginal cost of those holdings. If this is the case, then the only cost of holding cash is the relatively low return associated with the liquid assets (i.e. costs of carrying cash). However, prior research has pointed out that the agency costs could be even greater than any other costs of holding cash (see, for example, Dittmar *et al.*, 2003; Pinkowitz *et al.*, 2006; Dittmar and Mahrt-Smith, 2007; Kalcheva and Lins, 2007). With respect to corporate cash holding policy, managers and shareholders always view the costs and benefits of the liquid assets differently, which could result in the free cash flow problem emphasised by Jensen (1986), namely that managers in control of free cash flow will invest it in negative NPV projects rather than pay it out to shareholders.

From the perspective of agency theory, there are, in general, three reasons for managers to have greater incentives to hold cash in excess of the optimal level that is set to maximise shareholders' value. Firstly, managers may hold excess cash to avoid market discipline. This is because a firm that finds itself being short of funds to finance its new profitable investment opportunities can borrow external funds from capital markets. However, this does not come without a cost to the management, since borrowings from capital markets would in turn bring in extra

outside monitoring (Jensen, 1986). Secondly, managers are likely to hold more cash as they may want to have more financial flexibility to pursue their own interests. Cash is not simply negative debt for management, since it could allow managers to invest in projects that capital markets are reluctant to finance (Opler *et al.*, 1999). Moreover, as Opler *et al* (1999) argue, investing in liquid assets could enable management to avoid the discipline of capital markets, making it easier for managers to use cash for their private objectives at the expense of shareholders. Last but not least, management may pursue targets of empire building rather than maximising shareholders' wealth. In this sense, management may even waste its accumulated cash on poor projects when good projects are not available, instead of using the cash to make payouts to shareholders. Jensen (1986) suggests that the power of managers largely depends on what level of resources are under their control. Payouts to shareholders, however, reduce the resources, which in turn implies weaker managers' power. In addition to reducing managers' power, Jensen (1986) suggests that the payouts to shareholders may incur the monitoring of the capital markets as firms must obtain new capital to finance projects.

It is argued that managerial ownership can serve as a mechanism to better align managers' interests with those of the shareholders. However, it is worth noting that managerial ownership could be a 'double-edged' sword. On the one hand, managerial ownership gives managers incentives to maximise shareholders' wealth (alignment effect). On the other hand, higher managerial ownership may provide managers with a shelter against monitoring, making it much easier for managers to hold more cash to pursue their private benefits (e.g. first-class airline travel, five-star hotels) without risking replacement (entrenchment effect). Hence, the ultimate

impact of managerial ownership depends on the trade-off between the alignment and entrenchment effects.

Apart from the managerial ownership that could potentially affect corporate cash balances, the literature also suggests that the board structure (independence and size) may have some effects on the cash holdings, which is in relation to the role of the board structure in influencing managerial incentives. With respect to the role of board size in corporate governance, Jensen (1993) argues that small boards are more effective and efficient than large boards. For a sample of 452 US industrial firms between 1984 and 1991, Yermack (1996) reports an inverse relationship between board size and firm value. Moreover, he suggests that large board size would result in a decrease in the strength of CEO performance incentives, and the function of the threat of dismissal also operates less effectively as board size increases. However, bigger boards could increase the level of board monitoring and provide for greater business expertise, thus enhancing corporate performance (Anderson *et al.*, 2004). As such, a positive relationship between board size and corporate performance should be expected.

With respect to the board independence, the literature usually uses two measures. The first measure is the ratio of the number of independent directors (outside/non-executive directors) sitting on a board over the total number of directors. A generally accepted view in the literature is that independent directors are appointed to look after the shareholders' interests by effectively monitoring and disciplining managers (see, for example, Weisbach, 1988; Huson *et al.*, 2001). More specifically, it is argued that as the independent director representation becomes increasingly

larger, the monitoring effectiveness of the board increases, thereby containing the managerial discretion and enhancing corporate performance. Accordingly, firms with more independent boards are expected to perform a more effective and efficient monitoring and disciplining function over the management, which could in turn exert some influence on the corporate cash holdings. That is, a more independent board would force self-interested management to distribute excess cash to shareholders, instead of spending it on some unprofitable projects or wasting it on organization inefficiencies. Hence, from the perspective of agency theory, I would expect firms with more independent boards to hold lower amounts of free cash flows.

Another measure of board independence is the duality of the roles of the chairman of the board and CEO. It is argued that such duality of roles would enable the chairman of the board to enjoy absolute power over other members on the board. The duality of the chairman of the board and CEO has often been questioned in the literature, and opponents of the duality argue that it may constrain board independence and weaken its oversight and governance role (Fizel and Louie, 1990; Baliga *et al.*, 1996). Accordingly, firms with more independent boards are expected to perform a more effective and efficient monitoring and disciplining function over the management, which could in turn exert some influence on the corporate cash holdings.

5.2.5. Bank loans, 'soft-budget' constraints, ultimate controllers and ownership concentration

Debt financing is expected to improve the quality of corporate governance[29] and can play a positive role in motivating managers and their firms to be more efficient (Jensen, 1986). It is often argued that borrowings from banks (bank loans) could be more effective than any other forms of public debt in reducing agency problems and asymmetric information (see, for example, Diamond, 1984; Berlin and Loeys, 1988). This is because the utmost aim of banks after issuing loans to firms is to make sure that those firms can fulfill the legal requirements to repay interest and loans in due course. In doing so, banks can use their comparative advantage of collecting and processing information and of monitoring firms to ensure the safety of loans. Consequently, the information asymmetries between management and outsiders can be minimised by the banks' specialised knowledge (Tian and Estrin, 2007). Furthermore, banks providing or renewing a loan to a firm can present a positive signal to capital markets about that firm, which together with the reduction of the information asymmetries can make it much easier for the firm to have access to external finance. Arguably, this would imply lower corporate cash holdings in such firms.

China is transforming into a market economy and the private sector is playing an increasingly important role in its whole economy. However, state ownership is still prevalent in both enterprises and banks. According to the China Securities Regulation Commission (CSRC), the state owns on average more than one third of

[29] In general, the role of debt financing in disciplining management comes from the threat of bankruptcy, the reduction of free cash flows and close monitoring by debt issuers.

all outstanding shares of publicly listed companies (PLCs), while remaining as the ultimate controller in more than 80% of all PLCs. At the same time, the Chinese government has a dominant stake in the financial system. As for PLCs, bank loans are an important financing source which constitutes more than 20% of total assets in most PLCs. According to the China Banking Regulation Commission (CBRC), the 'Big Four' banks - the Industrial and Commercial Bank of China (ICBC), the Agricultural Bank of China (ABC), the China Construction Bank (CCB) and the Bank of China (BOC) - that are fully controlled by the state still provide a stunning amount of bank loans (more than 80% of total bank loans) to firms in China. Besides the 'Big Four' banks, most other banks are also controlled by the government.

It is important to note that the Chinese government is both creditor and debtor in state controlled PLCs. Tian and Estrin (2007) conclude that such a dual role of the Chinese government is in relation to 'soft-budget' constraints, defined as the expected re-negotiability of debts in state-owned enterprises, even when they are making losses. In this sense, the state may explicitly or implicitly put pressure on banks to provide new debts or renegotiate existing debts with those firms. Furthermore, banks are sometimes required by the state to issue 'policy loans' to support the loss-making state-owned enterprises. Under 'soft-budget' constraints, the governance role of bank loans that has been widely discussed in the Western literature (e.g. monitoring by creditors, reduction of free cash flows and the reduced asymmetric information between management and outsiders), may not hold in state-controlled firms in China. In contrast with state-owned firms, it might be more difficult, if not impossible, for private firms to get financial support from

banks, which would in turn imply more cash holdings in these firms.

According to agency theories, the ultimate controllers of firms could find it more beneficial to further their own interests at the expense of minority shareholders. It has been argued that liquid assets can be converted into private benefits at relatively lower cost than any other asset (Myers and Rajan, 1998). Hence, the investigation into corporate cash holding behaviour may represent a promising opportunity to provide direct evidence on the implications of agency problems for corporate governance.

From the perspective of agency theories, the identity of an ultimate controller can have a significant impact on a firm's incentives for cash holdings. The ultimate controller of Chinese PLCs can be mainly classified into five groups. They are the state asset management bureau at the central level (SAMBCG), state asset management bureaus at the local level (SAMBLG), SOEs affiliated to the central government (SOECG), SOEs affiliated to the local government (SOELG) and private investors, each of which has a different motive and incentive structure as I have thoroughly discussed in the last chapter. While the results drawn in the last chapter are supportive of the private control[30], we cannot rule out the possibility that private owners may overinvest in liquid assets, which would significantly lower corporate value. Dittmar *et al* (2003) suggest that it is possible that firms controlled by families may hold more cash as a store of wealth in order to avoid the

[30] In the last chapter I analysed the relationship between the identity of the ultimate controller and corporate performance of Chinese PLCs, the results of which can only provide the 'absolute' effect of the relationship. For example, a privately controlled PLC may suffer more agency costs in some respects than other state-owned PLCs, but its overall performance can still be superior to those state-owned ones.

payout of taxes. Using a sample of UK public firms from 1984 to 1999, Ozkan and Ozkan (2004) found that firms whose owners are families maintain significantly higher cash balances. They interpret their findings as showing that the inefficient long presence of family owners in the management would lead to higher agency costs. However, Dittmar *et al* (2003) consider the fact that in countries with weak investor protection it may be more expensive to raise external funds, as it is always the case that countries with weak investor protection have less developed capital markets, and borrowings might be prohibitively costly in those markets. Dittmar *et al*'s (2003) explanation is a much more benign one that firms in such countries only accumulate cash as a buffer against future cash shortfalls, and as a way of making them less likely to have to pass up valuable investment opportunities. As a case in point, China has the world's fastest-growing but least developed capital market relative to those in developed economies. Arguably, in China privately controlled firms are more subject to financial constraints than the state-owned ones, and it is possible that PLCs controlled by private owners realise the difficulties in accessing external finance and thereby retain more cash as a store of wealth in order to avoid possible cash flow shortfalls in the future. If this argument holds for Chinese PLCs, a positive and significant relationship between private owners and cash holdings can be observed, whilst the question of whether there are any differences in the behaviour of corporate cash holdings among different groups of the state owners is not clear.

Hypothesis 1: There is a target cash holding level for Chinese PLCs, and this target level could vary across PLCs with different ultimate controllers. Since privately-owned PLCs are more financially constrained, with other things being equal, they

are expected to hold more cash reserves than their state-owned counterparts.

Hypothesis 2: Due to the high adjustment costs, Chinese PLCs cannot instantaneously adjust towards the target cash holding level, and are thus expected to have a dynamic cash-holding partial adjustment process towards the target cash holding level. Moreover, among all PLCs, PLCs with private controllers have the fastest adjustment speed, as they have more difficulties in accessing external funds.

In addition to the identities of the ultimate owners, the control power distribution, as represented by the ownership concentration (calculated as the percentage of shares held by the largest shareholder), is argued to have significant effects on corporate governance (see, for example, Shleifer and Vishny, 1997; Claessens *et al.*, 2002; Chen *et al.*, 2007). More specifically, the role of ownership concentration is fairly complex, as concluded by Bai *et al* (2004): increasing ownership concentration from a low level may help address the free-rider problem. However, the further increase in ownership concentration could lead to the 'tunnelling' problem as emphasised by Johnson *et al* (2000), namely the 'entrenchment' effects. Finally, as the ownership concentration approaches 100 per cent, the 'alignment' effects start to work again to remove the 'tunnelling' problem. It is worth noting that the literature regarding ownership structure also suggests that outside (non-management) blockholders could play a positive role in disciplining the largest shareholder and enhancing firm value due to mutual monitoring (see, for example, Pagano and Roell, 1998; Bennedsen and Wolfenzon, 2000). However, the beneficial role of outside blockholders as monitors is likely to depend on the degree of investor protection. Faccio *et al* (2001) conducted a comparison analysis of

expropriation from the perspective of dividends using accounting data of listed companies from selected European and Asian economies, and report that Asian corporations with multiple blockholders pay significantly less dividends than similar corporations in Europe, which might indicate that in countries with weaker investor protection blockholders are more likely to collude with the controlling shareholder to expropriate the minority shareholders.

5.3. Data and variable construction

5.3.1. Data

To investigate the determinants and the dynamic adjustment mechanism of corporate cash holdings of Chinese PLCs, I gathered a sample of Chinese PLCs from the Shanghai Wind information database. The original sample for this study consists of all A-share PLCs listed on The Shanghai Stock Exchange (SHSE) and The Shenzhen Stock Exchange (SZSE) from 2001 to 2007, subject to data availability. As in the last chapter, the customised dataset provided by Sinofin Financial Information Service Co., Ltd. helps identify the type of the ultimate controller of each Chinese PLC and categorise these ultimate controllers into five groups: the state asset management bureau at the central level (SAMBCG), the state asset management bureaus at the local level (SAMBLG), State-owned enterprises (SOEs) that are affiliated to the central government (SOECGs) and those affiliated to the local governments (SOELGs), and private investors.

The initial sample has 9289 observations. The sample screening process is as follows: (1) Exclude firms for which operating performance data is not available

and follow the tradition of the literature to remove financial firms, due to them using a different financial reporting system(1606 observations dropped); (2) Drop firms whose leverage ratio is greater than one(5 observations dropped); (3) Eliminate firms with ST (Special Treatment) or PT (Particular Treatment) designation[31](1721 observations dropped); (4) Remove firms that do not have continuous operations (listing) for at least four years during the research period(899 observations dropped). As a result, the final sample is an unbalanced panel that consists of 5058 firm-year observations, and there are 785 firms in the sample.

5.3.2. Variable construction

5.3.2.1. Measuring corporate cash holdings

Following the patterns of the literature, I use the ratio of cash and cash equivalents to total assets as the proxy for corporate cash holdings (see, for example, Ozkan and Ozkan, 2004).

5.3.2.2. Corporate financial variables

Cash flows (CF_{it}): From the perspective of the financing hierarchy theory, in the presence of asymmetric information resulting in costly external financing, firms

---

[31] It is mandated by the CSRC that if a Chinese listed company reports accounting losses in two consecutive years, its stock will be put under 'Special Treatment' status (ST). If it fails to turn its accounting earnings back to positive in the third year, i.e. it reports losses for three consecutive years, it will be put under 'particular treatment' (PT) status. The market has imposed various trading and financial restrictions on ST and PT stocks. For example, unlike other normal listed companies, the stock price movement of an ST company is restricted to be no more than five per cent in either direction, and the company's semi-annual report must be audited. Furthermore, an ST company cannot raise additional capital from the stock market. A listed company with PT designation can only be traded on Fridays with a stock price limit of five percent fluctuation per day. Moreover, it will be delisted from the market if it continues to suffer losses in the fourth year. The rationale behind the ST and PT designations is that ST and PT companies are bad performers in the long run, and it is necessary to restrict or delist them in order to protect the interests of investors (Jiang and Wang, 2008).

prefer internal finance over informationally sensitive external finance in their financing policies (Myers and Majluf, 1984). Therefore, firms that have higher cash flows are expected to hold larger amounts of cash as a resource of internal funds. I use the ratio of cash flow to total assets as a proxy for the cash flow. A positive relationship between cash holdings and cash flows is expected. By contrast, the trade-off theory predicts a negative relationship between cash holdings and cash flow. Under the trade-off theory, firms can use their cash flows as a source of liquidity assets to finance new investments, and thus firms with high cash flows are expected to hold less cash.

Non-cash liquid assets (NWC_{it}): Within the framework of the trade-off theory, non-cash liquid assets are a substitute for holding cash. Transaction costs will arise when converting non-cash assets into cash in imperfect markets. It is reasonable to assume that the cost of converting non-cash liquid assets into cash is much lower as compared with other assets. Firms with sufficient liquid assets can liquidate non-cash liquid assets at low costs to raise funds when they find themselves being short of cash. The proxy for non-cash liquid assets is the ratio of net working capital minus cash to total assets. According to the trade-off theory, I expect a negative relationship between cash holdings and non-cash liquid assets. The financing hierarchy theory does not provide a clear prediction for the relationship between corporate cash holdings and non-cash liquid assets.

Leverage (LEV_{it}): The trade-off theory fails to provide a clear-cut prediction for the relationship between cash balances and the leverage ratio. Firms can use borrowings as a substitute for cash reserves because leverage can act as a proxy for

the ability of firms to issue debt. Moreover, the cost of funds used to invest in liquidity increases as the ratio of debt financing increases, which would imply a reduction in cash holdings with increased leverage. Therefore, a negative relationship is expected between a firm's cash holdings and its leverage. However, because of the existence of agency costs of debt, highly leveraged firms find it difficult and expensive to raise additional funds. These firms also sometimes find it impossible to renegotiate existing debt agreements to prevent default and bankruptcy. Such firms have high incentives to hold larger amounts of cash. In addition, it is worth noting that higher debt levels can increase the likelihood of financial distress, therefore I would expect a firm with a high leverage to increase its cash holdings to decrease the likelihood of financial distress. Accordingly, I would expect a positive relationship between cash holdings and leverage. Leverage is measured by the ratio of total debt to total assets.

It is argued that under the financing hierarchy theory, the cash holdings are mechanically adjusted by a firm's investment and financing decisions. Indeed, when retained earnings are insufficient to finance current investment needs, the firm would issue new debt, thus increasing leverage and drawing down its cash holdings. However, when retained earnings exceed investment needs, the firm repays debt and accumulates cash, hence a negative relationship could be expected between cash holdings and leverage.

Bank debt ($BANKDEBT_{it}$): Because of the comparative advantage of banks in monitoring firms' activities and in collecting and processing information, it is often argued that bank financing is more effective than public debt in reducing problems

associated with agency conflicts and informational asymmetries. Thus, the existence of a bank relationship would enhance the ability of firms to raise external finance through providing signals about a borrowing firm's credit worthiness. Moreover, bank debt can serve as a substitute for holding high levels of cash because bank debt is more easily renegotiated when firms need to. These arguments suggest that firms with more bank debt are expected to hold less cash. I measure bank debt as the ratio of total bank debt to total debt, and I expect a negative relationship between cash holdings and bank debt, according to the trade-off theory.

Growth opportunities ($MKTBOOK_{it}$): The trade-off theory and the financing hierarchy theory make the same prediction over the relationship between cash holdings and corporate growth opportunities. Asymmetric information between inside and outside investors makes external financing more expensive. Myers and Majluf (1984) argue that firms whose values are largely determined by growth opportunities face a more severe asymmetric information problem, hence firms with higher growth opportunities would hold larger amounts of cash in order to avoid passing up valuable projects in the future.

I measure firms' growth opportunities as the ratio of book value of total assets minus the book value of equity plus the market value of equity to book value of assets. Opler *et al* (1999) argue that the book value of a company does not contain any information about its future growth opportunities, and the higher market valuation relative to the book value of the company's assets suggests that the company has a high preponderance of future growth options. Higher market value can demonstrate the investors' expectation that a firm will have positive net present

value (NPV) projects in the future. Furthermore, the extant literature suggests that firms with greater growth opportunities are more likely to keep larger cash reserves in order to not forego future growth opportunities (see, for example, Ozkan and Ozkan, 2004; Harford *et al.*, 2008). Therefore, I would expect a positive relationship between cash holdings and growth opportunities.

Firm Size ($SIZE_{it}$): The size of firms is measured by the natural logarithm of total assets. The trade-off theory expects a negative relationship between cash holdings and the size of firms. Large firms may have less information asymmetry than small firms. Therefore, small firms face more borrowing constraints and higher costs of external financing than large firms. In addition, the cost of external financing is smaller for larger firms because of scale economies resulting from a substantial fixed cost component of security issuance costs. All of these would in turn imply that small firms should hold more cash. However, it is argued that within the framework of the financing hierarchy theory, larger firms tend to have higher levels of operational cash flows, hence a positive relationship between cash holdings and firm size should be expected.

Capital expenditures ($CAPEX_{it}$): The capital expenditures are measured as the ratio of capital expenditures minus depreciation to total assets. The trade-off theory and the financing hierarchy theory share many commonalities, as many variables used in explaining the trade-off theory are also employed in the financing hierarchy theory. The major difference between the two theories is that the trade-off theory suggests a positive relationship between cash holdings and capital expenditures, while the financing hierarchy theory suggests the opposite. Under the trade-off

theory, it is highly likely that firms with high investment needs hold more cash in order to support their investments and avoid expensive external borrowings, whereas the financing hierarchy theory suggests that firms always follow an order in their financing policies. Before resorting to external funds firms would first use accumulated cash to finance their investment projects.

Dividend payments ($DIVIDEND_{it}$): Dividend payments to shareholders are measured as the ratio of dividend payments to total assets. It is often argued that dividend-paying firms can raise funds by simply cutting their dividends, and in this sense a negative relationship should be expected between firms' cash holdings and dividend payouts. In contrast, as Ozkan and Ozkan (2004) argue, firms may hold more cash to maintain their dividend payment policy and thus a positive relationship may be observed. The trade-off theory does not therefore come up with a clear prediction regarding the relationship between cash holdings and firms' dividend policies.

Cash flow variability (CV_{it}): The cash flow variability is measured by the industry sigma motivated by Opler *et al* (1999). For each firm, I compute the cash flow standard deviation for the previous years, if available. I then take the average across industrial dummies of the standard deviations of firm cash flow (industry sigma). The trade-off theory suggests that firms with more cash flow uncertainty have more incentives to build up financial slack and retain more cash reserves in their daily operations to avoid situations in which they may suffer from cash shortfalls. Therefore, I expect a positive relationship between cash flow variability and cash holdings.

5.3.2.3. Corporate governance variables

The existing literature suggests that corporate governance should play an important role in establishing corporate cash holding behaviour (see, for example, Dittmar *et al.*, 2003; Ozkan and Ozkan, 2004; Dittmar and Mahrt-Smith, 2007; Harford *et al.*, 2008). In section 5.2, I have briefly discussed different corporate governance mechanisms and explained how these mechanisms could function in mitigating the agency conflicts between managers and shareholders, as well as those between large shareholders and minority shareholders. However, theory does not shed much light on the exact nature of the relationship between cash holdings and corporate governance mechanisms. The central theme of the literature on the relationship between corporate governance and cash holdings is that firms with good corporate governance and firms in countries with strong investor protection usually hold less cash (see, for example, Dittmar *et al.*, 2003; Ferreira and Vilela, 2004; Ozkan and Ozkan, 2004). If these arguments also hold for Chinese PLCs, then I would be able to make the following predictions. Firstly, Jensen (1993) argues that small boards are more efficient than large ones and hence board size ($BOARDSIZE_{it}$) of Chinese PLCs should be positively correlated with cash balances. However, I may also expect negative effects of board size on cash holdings in a sense that bigger boards may increase the managerial monitoring and enhance the financial accounting process, as documented by Anderson *et al* (2004). Secondly, shares held by the board ($INSIDERSHARE_{it}$) may help align the interests of shareholders and managers, indicating a negative relationship between $INSIDERSHARE_{it}$ and cash holdings. Thirdly, since the presence of independent directors ($INDEPENDENT_{it}$) helps improve corporate governance, I would like to see a negative relationship between $INDEPENDENT_{it}$ and corporate cash balances in Chinese PLCs. Fourthly,

it is argued that joint service ($DUALITY_{it}$) as the CEO and board chairman may erode the corporate system of checks and balances and compromise independence between directors and firm managers. In this sense, a positive relationship between $DUALITY_{it}$ and corporate cash holdings should exist. Fifthly, the relationship between controlling shareholders' ownership and the alignment of controller shareholder and minority shareholders' interests can be non-monotonic. To investigate this relationship, I include $TOPONE_{it}$ (percentage of shares held by the largest shareholder) as well as its quadratic term $TOPONE2_{it}$. Sixthly, due to the nature of non-management blockholders ($TOP4\_1_{it}$) in corporate governance, either a positive or a negative relationship could be expected between $TOP4\_1_{it}$ and cash holdings. Finally, it should never be neglected that the ultimate controller is always a determinative factor in corporate governance structure. Based upon the discussion in the literature section, I expect PLCs whose ultimate controllers are private owners to hold more cash.

Table 5.1 provides a brief explanation for the dependent variables as well as all independent variables. Panel A of Table 5.2 presents a detailed distribution of the sample of Chinese PLCs used in the analysis according to firms' ultimate controllers, and the balance of the panel is stated in panel B. It is clear from the table that the state is still in control of more than 80% of all Chinese A-share PLCs, with SAMBLG being the largest controlling group (36.1% of all observations).

Table 5. 1 Summary of variables

Variable Name	Variable Definition	Expected Sign
CH	Ratio of cash and cash equivalents to total assets	
LEV	Ratio of total liabilities over total assets	+/-
CF	Ratio of cash flow to total assets	+/-
BANKDEBT	Ratio of total bank debt to total debt	-
NWC	Ratio of net working capital minus cash to total assets	-
CAPEX	Ratio of capital expenditures minus depreciation to total assets	+/-
SIZE	Natural logarithm of total assets of firms	+/-
DIVIDEND	Ratio of dividend payments to total assets	+/-
MKTBOOK	Ratio of book value of total assets minus the book value of equity plus the market value of equity to book value of assets	+
CV	Industry sigma	+
SAMBCG	Dummy variable coded 1 if the ultimate controller is the SAMBCG; otherwise 0	-
SAMBLG	Dummy variable coded 1 if the ultimate controller is an SAMBLG; otherwise 0	-
SOECG	Dummy variable coded 1 if the ultimate controller is an SOECG; otherwise 0	-
SOELG	Dummy variable coded 1 if the ultimate controller is an SOELG; otherwise 0	-
BOARDSIZE	Size of board (number of directors)	+
INSIDERSHARE	Percentage of shares held by the executive offices and directors	-
INDEPENDENT	Ratio of the number of independent directors to the number of directors	-
DUALITY	Dummy variable coded 1 if board chairman is the CEO; otherwise 0	+
TOPONE	The percentage of shares held by the largest shareholder	+/-
TOPONE2	Quadratic term of TOPONE	+/-
TOP4_1	Ratio measured by the percentage of total shares held by the other top four shareholders over that held by the largest shareholder.	+/-

Notes: Real variables are deflated using the China's annual CPI.

Table 5. 2 Summary of the distribution of sample observations

Panel A: sample distribution per year						
Year	**SOELG(Obs.)**	**SAMBLG(Obs.)**	**PRIVATE(Obs.)**	**SAMBCG(Obs.)**	**SOECG(Obs.)**	**Total**
2001	315	132	39	1	101	588(11.6%)
2002	347	126	69	0	108	650(12.9%)
2003	267	209	113	4	121	714(14.1%)
2004	146	333	158	65	83	785(15.6%)
2005	139	329	161	69	83	781(15.4%)
2006	98	339	183	85	71	776(15.3%)
2007	69	356	180	118	41	764(15.1%)

Total(Pct)	1381(27.3%)	1824(36.1%)	903(17.8%)	342(6.8%)	608(12.0%)	5058(100%)

Panel B: balance of the panel

Number of observations	Number of firms
4	76
5	68
6	73
7	568

Notes: (1) SAMBCG is the state asset management bureau at the central level; SAMBLG is state asset management bureaus at the regional level; SOECG is an SOE supervised by the central government; SOELG is an SOE supervised by the regional government; PRIVATE is a Private investor; (2) Percentages are in brackets.

5.3.2.4. Summary statistics

Table 5.3 presents descriptive statistics for the main variables used in the analysis, and the Correlation matrix for the variables is included in Table A5.1 in the Appendix.

Table 5.3 reveals that the mean cash holding ratio in Chinese PLCs is 15.4% and the median value is 12.94%. These values are much higher than those reported for UK and US firms. For example, Kim *et al* (1998) reported that the mean and median values of the cash holdings for an average US firm were 8.1% and 4.7%, respectively. Ozkan and Ozkan (2004) tested a sample of publicly traded UK firms from 1984 to 1999 and found that the mean cash holding ratio of those firms was 9.9% and the median ratio was 5.9%. As I have discussed in previous sections, Chinese PLCs may maintain a higher level of cash holdings compared to firms in Western countries to avoid costly external financing, as well as to ensure that they do not have to pass up potential value increasing projects.

As reported in Table 5.3, the mean leverage ratio is 47.07% for my sample firms. Bank loans constitute a significant portion of total assets in these firms, with a mean ratio of bank loans to total debt of 44.9% (the median is 48.19%). Obviously borrowings from banks is an important source of debt financing for Chinese PLCs. Cash flows, on average, amount to around 6% of total assets for a PLC in China during any given financial period. Chinese PLCs seldom pay out dividends to their shareholders, as the mean dividend payout ratio is less than 1% of total assets. In addition, PLCs controlled by private investors, on average, have the best further growth opportunities (MKTBOOK=1.2506).

This table also reveals some aspects of the sample firms that are worth noting. It shows that on average in Chinese PLCs the largest shareholder holds around 43% of total outstanding shares, while the other top five shareholders in total hold less than half of the amount of shares held by the largest shareholder. It is also worth noting that around one third of firms' directors are independent directors, and in my sample 8.4% of firms have the positions of CEO and chairman of the board being simultaneously held by the same person. The average shareholdings held by the executive officers and directors are trivial for Chinese PLCs (the mean is 0.5%). This is because the majority of Chinese PLCs are ultimately controlled by the state, and in these state-controlled PLCs most top executives (especially the CEOs) are not true owners but civil cadres selected by the state through political processes (Firth *et al.*, 2006b). Moreover, in the state-controlled PLCs, executive ownership is usually granted by the state as part of the compensation and incentive structures, and normally amounts to only a minute portion of total outstanding shares.

Table 5. 3 Descriptive statistics of the sample

	Variable	Number of Observations	Mean	Standard Deviation	Min	Median	Max
Total	CH	5058	0.154	0.1042	0.0005	0.1294	0.7436
	SIZE	5058	21.4531	0.943	19.1776	21.3485	27.3005
	LEV	5058	0.4707	0.1696	0.0081	0.4825	0.9469
	CF	5058	0.0598	0.0803	-0.5	0.0584	1.0192
	BANKDEBT	5058	0.449	0.2306	0	0.4819	0.975
	NWC	5058	-0.0422	0.1784	-0.7039	-0.0435	0.7812
	CAPEX	5058	0.0694	0.0666	-0.1127	0.0494	0.6794
	MKTBOOK	5058	1.1412	0.6607	0.2249	0.9545	11.0683
	DIVIDEND	5058	0.0056	0.0074	0	0.0035	0.0843
	CV	5058	0.0718	0.0252	0.0011	0.0654	0.3034
	TOPONE	5058	0.431	0.1688	0.0324	0.4257	0.85
	BOARDSIZE	5058	9.7928	2.2481	2	9	21
	INSIDERSHARE	5058	0.005	0.0424	0	0	0.7481
	INDEPENDENT	5058	0.2934	0.1174	0	0.3333	0.7143
	DUALITY	5058	0.084	0.2775	0	0	1
	TOP4_1	5058	0.4944	0.5532	0.0019	0.2721	3.2998
	CH	1824	0.1384	0.0871	0.003	0.1194	0.7025
	SIZE	1824	21.5808	0.8586	19.4346	21.5082	24.7779
	LEV	1824	0.4877	0.1646	0.0126	0.5055	0.9083
	CF	1824	0.0635	0.0723	-0.3029	0.0614	0.5627

SAMBLG	BANKDEBT	1824	0.4578	0.2217	0	0.4957	0.9592
	NWC	1824	-0.075	0.18	-0.7039	-0.076	0.7812
	CAPEX	1824	0.0718	0.0666	0.0001	0.053	0.6022
	MKTBOOK	1824	1.1204	0.6819	0.2654	0.9385	11.0683
	DIVIDEND	1824	0.0055	0.0076	0	0.0035	0.0843
	CV	1824	0.0723	0.0252	0.0011	0.0654	0.1876
	TOPONE	1824	0.4281	0.1567	0.0355	0.4224	0.8375
	BOARDSIZE	1824	9.7873	2.2226	4	9	21
	INSIDERSHARE	1824	0.0005	0.005	0	0.0001	0.1101
	INDEPENDENT	1824	0.3127	0.103	0	0.3333	0.6
	DUALITY	1824	0.1031	0.3041	0	0	1
	TOP4_1	1824	0.4106	0.4771	0.003	0.2142	2.8885
SOELG	CH	1381	0.1583	0.0985	0.0005	0.1364	0.5729
	SIZE	1381	21.3304	0.8448	19.4751	21.2574	24.9871
	LEV	1381	0.4507	0.1654	0.0081	0.4491	0.9453
	CF	1381	0.0583	0.0772	-0.4561	0.0583	0.4857
	BANKDEBT	1381	0.4569	0.2254	0	0.4806	0.9685
	NWC	1381	-0.0302	0.1662	-0.5752	-0.0352	0.671
	CAPEX	1381	0.0723	0.0693	0	0.0509	0.6794
	MKTBOOK	1381	1.0771	0.4719	0.3798	0.957	4.8979
	DIVIDEND	1381	0.006	0.0069	0	0.0042	0.0504
	CV	1381	0.0694	0.0256	0.0144	0.0626	0.3034
	TOPONE	1381	0.4721	0.1719	0.06	0.4928	0.8485
	BOARDSIZE	1381	9.924	2.3155	2	9	20
	INSIDERSHARE	1381	0.0004	0.005	0	0	0.1218

	INDEPENDENT	1381	0.2455	0.1379	0	0.3077	0.6
	DUALITY	1381	0.0724	0.2593	0	0	1
	TOP4_1	1381	0.4475	0.5588	0.0025	0.1876	3.2694
PRIVATE	CH	903	0.1614	0.1119	0.0005	0.134	0.6736
	SIZE	903	21.1709	0.7735	19.2381	21.1003	24.2884
	LEV	903	0.4973	0.1606	0.0091	0.5151	0.9359
	CF	903	0.0477	0.0928	-0.5	0.0518	1.0192
	BANKDEBT	903	0.4911	0.2178	0	0.5234	0.975
	NWC	903	-0.0239	0.1946	-0.5858	-0.031	0.7174
	CAPEX	903	0.0631	0.0639	0	0.0451	0.4515
	MKTBOOK	903	1.2506	0.7769	0.3263	0.9829	7.2636
	DIVIDEND	903	0.0048	0.0072	0	0.0019	0.0777
	CV	903	0.0741	0.0267	0.0023	0.0663	0.1876
	TOPONE	903	0.3251	0.1368	0.0324	0.2907	0.8147
	BOARDSIZE	903	9.0875	1.98	4	9	18
	INSIDERSHARE	903	0.0259	0.0968	0	0	0.7481
	INDEPENDENT	903	0.3336	0.0837	0	0.3333	0.7143
	DUALITY	903	0.113	0.3167	0	0	1
	TOP4_1	903	0.8059	0.6348	0.0033	0.7241	3.2998
	CH	342	0.1529	0.1294	0.01	0.1164	0.6417
	SIZE	342	22.0531	1.3358	20.0045	21.7791	25.9615
	LEV	342	0.4835	0.19	0.0644	0.4931	0.9469
	CF	342	0.0631	0.0872	-0.2737	0.0533	0.3585
	BANKDEBT	342	0.3637	0.2465	0	0.3752	0.9007
	NWC	342	-0.0445	0.1759	-0.4976	-0.0293	0.5012

SAMBCG	CAPEX	342	0.0671	0.0638	0.0002	0.0456	0.3711
	MKTBOOK	342	1.2388	0.8186	0.2249	0.9606	6.5388
	DIVIDEND	342	0.0054	0.0084	0	0.0026	0.061
	CV	342	0.0721	0.0229	0.0291	0.0655	0.1876
	TOPONE	342	0.466	0.1467	0.1442	0.4806	0.85
	BOARDSIZE	342	10.117	2.08	6	9	17
	INSIDERSHARE	342	0.0004	0.0042	0	0	0.0549
	INDEPENDENT	342	0.3332	0.0705	0	0.3333	0.5
	DUALITY	342	0.0205	0.1418	0	0	1
	TOP4_1	342	0.3783	0.4398	0.0068	0.1788	2.0648
SOECG	CH	608	0.1609	0.1263	0.0009	0.1508	0.7436
	SIZE	608	21.4302	1.129	19.1776	21.1784	27.3005
	LEV	608	0.4186	0.178	0.0342	0.4269	0.8937
	CF	608	0.0686	0.084	-0.2119	0.0615	0.3946
	BANKDEBT	608	0.3898	0.254	0	0.4121	0.8771
	NWC	608	0.0032	0.1588	-0.4628	0.0002	0.5796
	CAPEX	608	0.066	0.0653	-0.1127	0.0451	0.4619
	MKTBOOK	608	1.1318	0.6536	0.3871	0.961	8.368
	DIVIDEND	608	0.0064	0.0074	0	0.0043	0.0501
	CV	608	0.0722	0.0225	0.0113	0.07	0.1876
	TOPONE	608	0.4841	0.1803	0.1291	0.4994	0.85
	BOARDSIZE	608	10.3766	2.3753	5	9	19
	INSIDERSHARE	608	0.0008	0.0093	0	0	0.1334
	INDEPENDENT	608	0.2617	0.1258	0	0.3333	0.5556
	DUALITY	608	0.0461	0.2098	0	0	1

	TOP4_1	608	0.4554	0.5192	0.0019	0.2175	3

Notes: This table shows the sample characteristics for Chinese PLCs over the period 2001 to 2007.

5.4. Empirical tests and results

In this section, I will focus on questions of whether the firm-specific and the corporate governance characteristics influence cash holding levels of firms and of how firms adjust their cash holdings towards the target level once the actual level of cash reserves deviates from the target level. In doing so, I employ the dynamic partial adjustment model of corporate cash holdings motivated by Ozkan and Ozkan (2004).

5.4.1. Dynamic partial adjustment model

In this subsection, I intend to go through a brief description of the dynamic partial adjustment model employed to explore the dynamic adjustment mechanism of corporate cash holdings in China.

Opler *et al* (1999) set up the base for the discussion on the target cash-holding level. The premise of the literature on this discussion is that firms could have various reasons to hold cash as long as financial markets are not perfect in the sense of Modigliani and Miller (1958). Dittmar and Mahrt-Smith (2007) argue that the optimal level of cash holdings is determined by the costs and benefits of holding cash, as well as firms' idiosyncratic reasons[32]. The cash holdings level, in this sense, must be optimal at maximising shareholders' value, which may not always be the case in the presence of agency problems. Therefore, the actual target level of corporate cash reserves is co-determined by the financial as well as corporate governance characteristics.

[32] Dittmar *et al* (2003) suggest that family-controlled firms may hold cash reserves for tax reasons.

$$CH_{it}^{*}=\boldsymbol{X\beta}+\tau_t+f_i+\varepsilon_{it} \quad (1)$$

The Model (1) is the model determining the target cash level, where the CH_{it}^{*} is the firm's target level of cash holdings in year t, $\boldsymbol{X}$ is a vector of firms' characteristics including both firm-specific and corporate governance characteristics, f_i is unobserved panel-level effects and $\varepsilon_{it}$is the disturbance term. I also include time dummies to remove universal time-related shocks from the errors. τ_t is a vector of time dummies. $\boldsymbol{\beta}$ contains unknown coefficients to be estimated.

Although CH_{it}^{*} is the target level of cash holdings, a firm's actual level (CH_{it}) of cash holdings does not necessarily always stick to it. From the perspective of the trade-off theory, the firm will start adjusting its cash holdings towards the target level, once its actual cash holdings depart from the target cash-holding level. However, in the presence of market imperfections, the adjustment cannot be achieved in one go, which leads to a partial adjustment model given by:

$$CH_{it}\text{-}CH_{it-1}=\gamma(CH_{it}^{*}\text{-}CH_{it-1}) \quad (2)$$

where the target change is determined by $CH_{it}^{*}\text{-}CH_{it-1}$. Considering the expensive adjustment costs that may be incurred in imperfect capital markets, it is likely that firms would only adjust a fraction γ of the target change in one period. The value of γ lies between zero and one, representing firms' abilities to adjust to their target cash-holding levels. If γ equals one, firms are able to achieve the target change immediately, which also implies that there are no adjustment costs in the markets. By contrast, if γ equals zero, firms cannot adjust their current cash levels towards target levels, since adjustment costs are extremely high and not affordable.

Combining Model (1) into Model (2) yields:

$$CH_{it}=\delta CH_{it-1}+\boldsymbol{X\theta}+\vartheta_t+\mu_i+u_{it} \quad (3)$$

where $\delta=1-\gamma$, $\boldsymbol{\theta}=\gamma\boldsymbol{\beta}$, $\vartheta_t=\gamma\tau_t$, $\mu_i=\gamma f_i$, and $u_{it}=\gamma\varepsilon_{it}$. u_{it} should have the same properties as ε_{it}, and $\mu_i$and u_{it} are assumed to be independent for each i over all t. Model (3) is the dynamic partial adjustment model I will use to test the dynamic adjustment mechanism of cash holdings of Chinese PLCs.

5.4.2. Regression results

To control for the endogenity problem as I have stressed in the introduction section of this chapter, Ozkan and Ozkan (2004) employ the 'First-differenced GMM' to achieve robust estimations. However, 'First-differenced GMM' has been found to have poor finite sample properties, particularly when the number of time periods available is small. Blundell and Bond (1998) found that the 'First-differenced GMM' may be subject to a downward finite sample bias, according to their simulation results. This occurs as the autoregressive process becomes too persistent or as the variance of the fixed effects increases relative to the variance of the idiosyncratic shock (Bond *et al.*, 2001). From the empirical experience, the corporate cash holdings change fairly slowly over time, making a quite persistent autoregressive process. In this sense, using 'First-differenced GMM' to estimate cash holdings in an empirical analysis may lead to biased results. To improve estimation accuracy Blundell and Bond (1998) propose the 'System GMM'[33] estimator, which has been proven to have superior finite sample properties. Moreover, compared with the 'First-differenced GMM' that only uses moment

[33] Please refer to the last chapter for a thorough discussion of these problems and a brief introduction of GMM.

conditions in first-differenced equations, the 'System GMM' exploits a system of both the set of moment conditions in first-differences and the additional set of moment conditions in levels, enabling it to be more efficient in its estimation. Therefore, in Table 5.4, the reported results mainly rely on the estimates provided by the 'System GMM' method[34]. Though OLS and fixed-effects estimators are actually biased estimators for dynamic panel data, they are able to provide a range that should contain good estimates of the true lagged dependent variable[35]. To ensure the results are not influenced by the presence of outliers, all variables except dummy variables are winsorised at both tails of their distribution. The winsorisation is at the both 1 and 99 percentile points of the distribution.

Table 5.4 presents the estimation results of the dynamic partial adjustment model of cash holdings for an unbalanced panel of Chinese PLCs over the period 2001 to 2007. Columns (1) and (2) report estimation results using OLS and Fixed-effects estimators respectively, and column (3) describes the results provided by the 'System GMM' estimator. The following discussion of the results will be based around estimates of the 'System GMM' estimator, which is able to convey estimates robust to the endogenity problem by using instrumental variables. It

---

[34] Bond *et al* (2001) have provided a test to see whether the system GMM estimator is the appropriate one. This test consists of comparing the coefficient of the lagged dependent variable obtained when the equation is estimated by OLS, fixed effects and first-difference GMM. As the OLS estimate of the coefficient of the lagged dependent variable is upward biased while that obtained with a fixed effects estimator is downward biased, one would expect the first-difference GMM coefficient to lie between the two. If however, it lies below or very close to the fixed-effects estimate then one needs to use the system GMM estimator. Although I have found that in my study the majority of results produced by both first-difference and system GMM estimators are similar, the coefficients of the lagged dependent variable given by the first-difference estimator are sometimes close to or even smaller than the corresponding fixed-effects estimates. Therefore, I choose to rely on the system GMM estimator.

[35] In OLS regression, the lagged dependent variable is positively correlated with the error, biasing its coefficient estimate upward, while the Fixed-effects estimator is expected to bias it downward (Roodman, 2006, p.18).

should be noted that the validity of instruments depends on the absence of higher-order serial correlation in the first-differenced disturbance term and is justified by the overidentifying (Sargan) test. The reported test statistics of serial correlation (AR (1) and AR (2)) and overidentifying (Sargan) test suggest that the set of instruments in column (3) is verified.

Table 5. 4 Estimation results for the dynamic partial adjustment model

	(1)	(2)	(3)
	OLS	**Fixed**	**System-GMM**
CH_{it-1}	0.6443***	0.2949***	0.3939***
	(23.51)	(6.37)	(15.91)
$CH_{it-1} * SOECG_{it}$	0.0158	0.0891*	0.1970***
	(0.44)	(1.79)	(5.21)
$CH_{it-1} * SAMBCG_{it}$	0.1005**	0.0767	0.1704***
	(2.40)	(1.30)	(3.89)
$CH_{it-1} * SOELG_{it}$	0.0827*	-0.0415	0.2792***
	(1.79)	(-0.46)	(5.99)
$CH_{it-1} * SAMBLG_{it}$	0.0542	0.0384	0.2090***
	(1.61)	(0.77)	(5.18)
$BOARDSIZE_{it}$	-0.0004	-0.0014	-0.0012
	(-0.87)	(-1.60)	(-1.25)
$INDEPENDENT_{it}$	-0.0256	-0.1667	-0.1049*
	(-0.93)	(-1.38)	(-1.92)
$INSIDERSHARE_{it}$	0.0064	0.0152	0.0622**
	(0.45)	(0.77)	(2.47)
$DUALITY_{it}$	-0.0014	-0.0065	0.0084*
	(-0.41)	(-0.92)	(1.69)
$SIZE_{it}$	0.0015	0.0301***	0.0036
	(1.25)	(4.79)	(1.01)
LEV_{it}	-0.0551***	-0.2085***	-0.0819***
	(-6.05)	(-8.47)	(-4.51)
CF_{it}	0.2576***	0.2079***	0.2893***
	(14.40)	(9.61)	(11.47)
$BANKDEBT_{it}$	-0.0222***	-0.0010	0.0087
	(-4.14)	(-0.09)	(0.88)
NWC_{it}	-0.0694***	-0.2092***	-0.1115***
	(-8.34)	(-11.43)	(-6.71)
$CAPEX_{it}$	-0.2897***	-0.2191***	-0.2474***
	(-15.28)	(-8.51)	(-9.46)
$MKTBOOK_{it}$	0.0050*	0.0087***	0.0125***
	(1.84)	(2.71)	(4.37)
$DIVIDEND_{it}$	-0.1965	0.0963	-0.5664**
	(-1.18)	(0.44)	(-2.15)
CV_{it}	0.0642	0.0164	0.1764***
	(1.15)	(0.28)	(3.03)
$TOPONE_{it}$	0.0300	0.0711	0.0593

	(0.89)	(1.03)	(1.05)
$TOPONE2_{it}$	-0.0377	-0.0624	-0.0071
	(-1.09)	(-0.91)	(-0.13)
$TOP4\_1_{it}$	-0.0004	0.0144**	0.0264***
	(-0.14)	(1.98)	(4.35)
$SOECG_{it}$	-0.0207***	-0.0354***	-0.0276**
	(-3.04)	(-3.24)	(-2.57)
$SAMBCG_{it}$	-0.0126*	-0.0075	-0.0266***
	(-1.81)	(-0.60)	(-2.72)
$SOELG_{it}$	-0.0041	-0.0259***	-0.0272***
	(-0.68)	(-3.02)	(-3.15)
$SAMBLG_{it}$	-0.0123**	-0.0171**	-0.0261***
	(-2.35)	(-2.19)	(-3.27)
Cons	0.0386	-0.4839***	0.0640
	(1.28)	(-3.69)	(0.71)
Obs	4273	4273	4273
R^2	0.6678	0.3511	
AR(1)			0.0000
AR(2)			0.8610
Sargan			0.2792

Notes: (1) Dependent variable is CH_{it}; (2) Time-effects are included in all columns;(3) Industrial and regional effects are controlled in columns (1) and (3); (4)T-statistics are reported in brackets in columns (1) and (2), while Z-statistics are reported in brackets in column (3); (5) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator; (6)Instruments for the 'system-GMM' estimator are CH_t lagged t-2 only, and all other independent variables lagged t-2 to t-5 that are used as instruments in the first-differenced equations, with lagged first-differences of all independent variables as instruments in level equations; (7) * P-value≤10%, ** P-value≤5% and *** P-value≤1%.

Table 5. 5 Instruments for the 'System-GMM' estimator

Instruments for the first-differenced equations	Instruments for the level equations
CH_t lagged t-2 only, and all other independent variables lagged t-2 to t-5	lagged first-differences of all independent variables

Notes: Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator and the exogenous variables use themselves as instruments

Table 5.4 shows that in all columns the coefficients of the lagged cash are positive and significantly different from zero at the 1% level, and the coefficient estimate of the lagged cash of 'System GMM', as expected, falls between values of the lagged cash provided by the OLS and the fixed-effects models. Within the framework of the dynamic partial adjustment model of cash holdings, this is evidence for the

existence of target levels of cash holdings. For instance, in column (3) the coefficient estimate is 0.3939, which means the adjustment speed is 0.6061=1-0.3939 (γ=1-δ) for Chinese PLCs whose ultimate controllers are private owners. The results could be seen as evidence that target cash levels exist for Chinese PLCs, and it is impossible for them to instantaneously reach the target cash level. One possible explanation for delays in the adjustment process is the existence of transaction and other adjustment costs in the capital markets. It might be interesting to investigate whether PLCs controlled by different ultimate controllers possess heterogeneity in the adjustment speed. To do so, interaction terms between the lagged cash and dummy variables representing different controlling groups are therefore included in the model. The positive and significant coefficient estimates of four interaction terms suggest that on average PLCs with private owners have the swiftest adjustment speed.

The estimated coefficient of cash flows on cash holdings is positive and statistically significant at the 1% level in all columns. The positive and significant coefficient of cash flow is in line with the financing hierarchy theory that firms with higher cash flows prefer to hold larger amounts of cash due to their preference for internal over external finance. Firms with high cash flows can repay debt and accumulate cash. The estimated coefficient is 0.2893 in column (3), which means that on average, when a firm's operational cash flow increases by 0.01, its cash holdings will correspondingly increase by around 0.003. It is worth noting that firms tend to retain a significantly large fraction of their operational cash flows in the form of cash and cash equivalents within the firm. It seems that Chinese PLCs have great incentives to generate cash reserves out of corporate cash flows.

The trade-off theory predicts a negative relationship between cash holdings and borrowings from banks, implying that firms can use bank loans as an effective substitute for their cash reserves. More specifically, bank debt is more effective than public debt in dealing with problems arising out of agency problems and asymmetric information, thus lowering the cost of external financing (see, for example, Diamond, 1984; Berlin and Loeys, 1988). Furthermore, this finding is also in line with the argument that an announcement of a bank's issuing or renewing a loan to a firm can provide positive signals about the borrowing firms' credit worthiness, and the existence of a bank relationship could enable firms to have easier access to external funds (James, 1987), hence a negative relationship between bank debt and corporate cash holding should be expected for Chinese PLCs. However, according to Table 5.4, there is no strong evidence supporting the idea that bank debt financing has effects on corporate cash holdings, as the coefficient estimate of bank debt is insignificant at all conventional levels.

The negative and statistically significant coefficient of CAPEX (ratio of capital expenditures minus depreciation to total assets) in all columns contradicts the trade-off theory but supports the financing hierarchy theory, which suggests that firms have a greater preference for internal over external finance in their financing policies in the sense that if new investment projects come up, firms have the tendency to finance these projects primarily with their accumulated cash and cash equivalents. The estimated coefficient of CAPEX in column (3) is -0.2474 and this is statistically significant at the 1% level. According to Table 5.3, the mean and standard deviation for CAPEX are 0.0688 and 0.0637, respectively. If a PLC increases its CAPEX by one-standard-deviation then its cash holdings (CH) will

decrease by approximately 0.0158. Given that the mean of cash holdings is 0.1539, a one-standard-deviation increase in CAPEX leads to a decline of around 10% in the PLC's cash holdings.

The estimated coefficient of leverage is significant and negative at the 1% level in column (3), which is in favour of the financing hierarchy theory. According to the financing hierarchy theory, it is argued that cash holdings are mechanically adjusted by firms' various investment and financing decisions. That is, a firm can increase its cash holdings by issuing new debt in order to finance current or future projects, which would increase its leverage ratio. When the firm's retained earnings exceed investment needs, it will repay debt and thus accumulate cash reserves. Moreover, the significant and negative coefficient of leverage ratio suggests that the leverage can be seen as a signal showing the ability of a firm to issue new debt, which would in turn lead to a negative relationship between the firm's leverage and cash holdings.

The estimated coefficient of MKTBOOK in column (3) is 0.0125, and this is statistically significant at the 1% level. The results suggest that Chinese PLCs with more growth opportunities hold more cash, as predicted by both the trade-off and the financing hierarchy theories discussed in section 5.2. These two theories both suggest that when external financing is non-existent or prohibitively expensive, firms with strong growth opportunities, as represented by the market to book ratio, tend to hold more cash to guarantee their financing, thereby avoiding having to forgo valuable projects.

The estimated coefficient of CV is 0.1764, and this is statistically significant at the 1% level (z-statistic=3.03). As predicted by the trade-off theory, the results reported in Table 5.4 suggest that firms with more cash flow uncertainty are more incentivised to keep higher levels of cash reserves in their daily operations. Moreover, it is often argued that it is much easier for dividend-paying firms to raise funds by simply cutting their dividend payments to shareholders. In this sense, a negative link between dividend payments and cash holding should be expected. The results of Table 5.4 provide empirical evidence for this argument. In addition, according to the trade-off theory, non-cash liquid assets are an immediate substitute for cash. It is therefore reasonable to assume that firms with sufficient liquid assets can easily convert their non-cash liquid assets into cash holdings at low costs when they are short of cash reserves, hence a negative relationship between these two would be expected. According to Table 5.4, the coefficient of non-cash liquid assets (NWC) is -0.1115 with its z-statistic being -6.71. The standard deviation of NWC is 0.1731 according to Table 5.3, hence a one-standard-deviation decrease in non-cash liquid assets yields an increase of 0.0193 in cash holdings. The mean value of cash holdings is 0.1539, so a one-standard-deviation decrease in non-cash liquid assets yields a 12.5% increase in cash holdings.

As for corporate governance mechanisms, there are several interesting findings that are worth noting. Firstly, the positive and statistically significant coefficient of INSIDERSHARE contradicts my prediction that insider ownership may help align the interests of insiders and outsiders, thereby lowering corporate cash holdings. Agency theory does not expect such a positive relationship, and this positive relationship might be due to the fact that privately-controlled PLCs that usually

have higher levels of insider ownership are found to maintain larger cash balances, while PLCs controlled by state entities have trivial insider ownership and retain significantly less cash than the privately-controlled ones. However, I cannot directly test for it. This would require further investigation which is beyond the scope of the current study. Secondly, Faccio *et al* (2001) suggest that the role of non-management blockholders depends on investor protection, and in countries with weak investor protection blockholders may collude with the controlling shareholder to expropriate minority shareholders. For Chinese PLCs, it appears that my findings are supportive of Faccio *et al*'s (2001) argument. Last but not least, my findings show that the overall explanatory power of corporate governance characteristics over cash holding decisions is not strong. Rather, the identities of the ultimate controllers of PLCs do seem to play an important role in cash holding decisions. Table 5.4 and Table 5.6 suggest that PLCs controlled by state entities hold significantly less cash than their private counterparts, while there is no consistent difference in cash holding policy among state-owners. For instance, PLCs with SAMBCG as the ultimate controller on average hold 2.66% lower cash holdings than private owners, when all other factors are equal. Considering that the mean cash holdings for Chinese PLCs is about 15.4%, it is also economically significant. Based upon the results given in column (3), both short-run and long-run differences in cash holdings among the five controlling groups of Chinese PLCs are depicted in Table 5.6.

Table 5. 6 Test of equality in coefficients (Wald statistics[36])

	Short-run	Long-run
SAMBLG VS.SOECG	0.14	0.01
SAMBLG VS. SAMBCG	0.22	0.19
SAMBLG VS. SOELG	1.35	0.18
SAMBLG VS. Private	10.69***	7.98***
SOECG VS. SAMBCG	0.03	0.26
SOECG VS.SOELG	0.02	0.01
SOECG VS. Private	6.61**	4.84**
SAMBCG VS.SOELG	0.01	0.00
SAMBCG VS. Private	7.38***	4.83**
SOELG VS. Private	9.90***	7.66***

Notes: * P-value≤10%, ** P-value≤5%, and *** P-value≤1%.

Based upon the results given in Table 5.4, Table 5.6 reports the test statistics of both short-run and long-run differences in cash holdings among five controlling groups of Chinese PLCs. The long-run coefficients are extracted from the corresponding short-run coefficients in the AR (1) model. In order to illustrate how it can be realised, I use a simple AR (1) model--- $y_{it}=\alpha y_{it-1}+\beta x_{it}+u_{it}$, without loss of generality. In such an AR (1) model, the lagged dependent variable on the right hand side can expand out in the way that $y_{it-1}=\alpha y_{it-2}+\beta x_{it-1}+u_{it-1}$, $y_{it-2}=\alpha y_{it-3}+\beta x_{it-2}+u_{it-2}$,....., $y_{it-T}=\alpha y_{it-T-1}+\beta x_{it-T}+u_{it-T}$. As the model expands out, the sum of coefficients in front of all xs will be $\beta+\alpha\beta+\alpha^2\beta+\alpha^3\beta+.....+\alpha^T\beta$, and it will reach its limit---$\frac{\beta}{1-\alpha}$, as $T\to\infty$. Compared with the short-run coefficient β, $\frac{\beta}{1-\alpha}$ is the long-run coefficient. For example, the long-run coefficient for SOECG in column

[36] To test a set of linear or nonlinear hypothesis---$\mathbf{H_0}$: $\mathbf{R}(\boldsymbol{\theta})=\mathbf{q}$, after fitting a model, I use the Wald test statistics: $W=\{\mathbf{R}(\hat{\boldsymbol{\theta}})-\mathbf{q}\}'(\mathbf{GVG}')^{-1}\{\mathbf{R}(\hat{\boldsymbol{\theta}})-\mathbf{q}\}$, which under $\mathbf{H_0}$, in large samples, has a *Chi*-squared distribution with degrees of freedom equal to the number of equations in $\mathbf{R}(\hat{\boldsymbol{\theta}})-\mathbf{q}=0$, i.e. the number of restrictions. $\hat{\boldsymbol{\theta}}$ is the $1\times k$ estimated coefficient vector. $\mathbf{V}$ is the $k\times k$ estimated asymptotic covariance matrix, and $\mathbf{V}=Est.Asy.Var[\hat{\boldsymbol{\theta}}]$. $\mathbf{G}$ is the derivative matrix of $\mathbf{R}(\hat{\boldsymbol{\theta}})$ with respect to $\hat{\boldsymbol{\theta}}$. $\mathbf{R}$ is a function returning a $j\times 1$ vector.

(3) in Table 5.4 can be calculated as $\frac{-0.0276}{1-(0.3939+0.1970)}$=-0.6185. Based on the results in Table 5.6, it is interesting to find that privately-controlled PLCs hold significantly more cash holdings than those controlled by state owners both in the short-run and in the long-run. Moreover, it seems that there is no significant difference in the level of cash holdings among state controlled PLCs.

In addition, some tests have been conducted in order to examine whether the differences in the coefficients associated with the lagged dependent variable across firms controlled by different agents are statistically significant. The test statistics are wald-statistics, and the test statistics for four interaction terms are 25.13, 35.86, 27.14, and 26.82, which are all statistically significant at the 1% level. However, they are not found to be significantly different from each other. The test results suggest that even though all PLCs controlled by the state have slower adjustment speeds than those controlled by private owners, PLCs controlled by different state agents are found to have similar adjustment speeds.

5.4.3. Robustness check

To check whether my results are robust to alternate measures of some key variables, a series of robustness tests have been conducted, and corresponding results are reported in Table A5.2 in the Appendix. In order to check whether the results given in Table 5.4 are consistent for alternative measures of a firm's size and leverage ratio, I calculate a firm's size as number of employees and leverage ratio as a firm's total liability over total assets minus total liability. The results are reported in columns (1), (2) and (3) of Table A5.2. Some additional robustness checks have

been conducted by using different measures of dependent variables. Columns (4), (5) and (6) of Table A5.2 report results by estimating regression models using cash to total assets net of cash ratio as the dependent variable. Also, total assets in the denominators of variables are calculated as assets net of cash in producing results reported in columns (4), (5) and (6). Furthermore, to see whether my results are robust to using cash to sales ratio as the dependent variable, corresponding estimation results are provided in columns (7), (8) and (9) of Table A5.2. The results of Table A5.2 suggest that my main conclusion holds when alternate measures of dependent and independent variables are adopted.

5.5. Conclusion

This chapter has empirically investigated the corporate cash holdings for a sample of Chinese PLCs over the period 2001 to 2007. Both the trade-off theory and the financing hierarchy theory are found to have some explanatory power over corporate cash holdings of Chinese PLCs. Also, the findings of this chapter provide several interesting features that are worth noting.

Firstly, my results indicate that there exists a target cash holding level for Chinese PLCs, and this target level could vary across PLCs with different ultimate controllers. It is interesting to discover that PLCs whose ultimate controllers are private owners hold significantly more cash holdings than state owners both in the short-run and in the long-run, while there is no significant difference in the level of cash holdings among state controllers. This finding is consistent with two possible explanations. On one hand, it might be evidence revealing that private owners in China may have incentives to expropriate minority shareholders by increasing the amounts of liquid assets under their control that can be used to pursue their own benefits. On the other hand, it might be due to the possibility, as suggested by Dittmar *et al* (2003), that firms in countries with less developed capital markets may only accumulate cash as a buffer against future cash shortfalls. As discussed above, compared with state-controlled PLCs that have easier access to external funds, private PLCs in China are considered to be more financially constrained. In order not to fall into the state of cash shortage that would force firms to forgo good investment opportunities, private PLCs have a greater tendency to keep high liquidity levels, which could also help lower their financial risks.

Secondly, I found evidence supporting the dynamic cash-holding partial adjustment model for Chinese PLCs. The results are consistent with the view that due to the high adjustment costs, Chinese PLCs cannot instantaneously adjust towards the target cash level. Moreover, it is interesting to note that among all Chinese PLCs, PLCs with private controllers are found to have the fastest adjustment speed. The finding regarding the heterogeneity in the adjustment speed could be seen as evidence that PLCs with private owners in China might have more difficulties in accessing external finance, and are thus more cautious about their cash-holding positions. In order to avoid falling into embarrassing situations (like cash shortage) that could potentially increase their financial risks, they have a greater tendency to swiftly adjust their cash holdings towards the target level by all possible means. Another possible explanation for this finding might be simply that privately-controlled PLCs in China are more operationally efficient than their state-controlled rivals.

Additionally, the results indicate that PLCs with higher cash flows and more cash flow uncertainty hold more cash than other PLCs. In stark contrast, PLCs with more non-cash liquid assets and higher leverage ratios are found to retain less cash reserves. Moreover, dividend-paying PLCs, if necessary, can quickly build up their cash holdings by cutting their dividend payments. My results support this argument. Finally, my analysis also reveals that growth opportunities of Chinese PLCs exert positive impacts on the cash holdings, while their capital expenditures do exactly the opposite.

CHAPTER SIX
TOP EXECUTIVE TURNOVER AND EXIT TYPES OF CHINESE PUBLICLY LISTED COMPANIES

6.1. Introduction

The relationship between top executive turnover and corporate performance has been the focus of a large and ever growing body of literature, as research in this area could provide a crucial measure of the effectiveness of different corporate governance mechanisms with which a firm solves agency problems (Kato and Long, 2006). Despite the vast literature focused mostly on US and UK markets, the literature on Chinese listed firms is small but burgeoning. More importantly, China would make an ideal case for the study of executive turnover for at least two reasons. First, given the lack of an effective market for corporate control in China, the internal corporate governance mechanism that determines executive turnover is particularly important. Second, agency problems (including both the 'classic' agency conflicts and the 'new' agency conflicts) are acute in China due to vaguely defined property rights and weak investor protection.

China has undergone a large amount of economic reform in the past three decades. This reform has privatised and corporatised a large number of former state-owned

enterprises (SOEs), and many of these enterprises or their profitable operating units have then been listed on China's two stock exchanges. Going public, on paper, allows the publicly listed companies (PLCs) in China to attach top priority to the goal of profit-maximisation. To assist this goal, China's Company Law enacted in 1994 (and recently amended in 2006) requires Chinese PLCs to adopt a formal governance structure that is actually based on Western-style corporate management and governance practices combined with Chinese characteristics (Chen *et al.*, 2006). The Company Law (1994) is China's first company law to provide a comprehensive guideline for how limited companies and public limited companies should operate within the boundary of the People's Republic of China. It covers almost every aspect of corporate issues, such as corporate constitution, capital requirement, shareholders' meetings, share transfer and trading, bankruptcy, merger and acquisition, corporate accounting and financial transparency, and corporate bond. For example, according to the Company Law of 1994, the number of shareholders of a limited company should be between two and 50, the minimum capital requirement is 0.3 million RMB if the limited company is a retail company, and its board of directors should consist of three members at minimum and 13 members at maximum.

In 1999 China's first Securities Law was enacted to regulate various aspects of securities transactions and other dealings in China. Also, the Securities Law (1999) grants the CSRC the primary power to regulate markets. In accordance with the principles of the Company Law (1994), the Securities Law (1999) and other relevant laws and regulations, the Code of Corporate Governance for Listed Companies (CCGLC) in China, authorised and published by the Chinese Securities

Regulatory Commission (CSRC) and the State Economic and Trade Commission (SETC) in 2002, expands on the Company Law of 1994 by setting forth in great detail a set of basic principles for corporate governance of Chinese PLCs, such as basic rules for shareholders and shareholders' meetings, behaviour rules for controlling shareholders, election procedures for directors, duties and composition of the board of directors, and incentive and disciplinary system for management. The CCGLC is applicable to all PLCs in China and plays an important role in setting up the basic corporate governance system at Chinese PLCs, protecting investors' interests and providing basic behaviour rules and moral standards for directors, managers and other senior management members of PLCs. The CSRC requires all Chinese PLCs to act in the spirit of the CCGLC to improve their corporate governance practices.

According to agency theory, corporate governance mainly focuses on addressing two types of agency problems. The first type is the 'classic' agency problem, which refers to the conflicts arising out of the diverging interests between managers and shareholders (Jensen and Meckling, 1976; Fama, 1980; Fama and Jensen, 1983a, b). The other is the 'new' agency problem, which is in relation to the discrepancies of interests between controlling shareholders and minority shareholders (La Porta *et al.*, 1997, 1998, 1999, 2000a, b). In order to deal with these two types of agency problems, existing literature on corporate governance has suggested a variety of corporate governance mechanisms (both internal and external mechanisms[37]) that can be used to mitigate those agency conflicts. The internal mechanisms include

[37] See Shleifer and Vishny (1997) for a theoretical review.

those like the executive compensation contracts, the board of directors and the ownership structure, while the external mechanisms include those like the market for corporate control and legal protection. Arguably, whether these corporate governance mechanisms can work effectively and efficiently could depend on a number of issues, such as the historical development, legal concerns, and the institutional characteristics of the country in which a company is domiciled (Firth *et al.*, 2006a). Measuring the effectiveness and efficiency of corporate governance systems is always a matter of complexity as it involves all possible aspects of a firm, and each element of the corporate governance system is difficult to quantify. Instead of providing a very detailed picture of corporate governance systems for their sample firms, the majority of previous studies on corporate governance have tended to focus on a specific approach or angle through which they determine the quality of corporate governance at these firms. One approach[38] to examine top executive performance-turnover sensitivities, among others, is arguably an important and informative method of measuring the quality of corporate governance systems. This approach is the one I use in this chapter, and it is logically based on the premise that a firm with good corporate governance should hold top management accountable for its business operations, and oust it if a firm's performance is unsatisfactory.

Most previous research on top executive turnover has been conducted in Western countries whose capital markets are mature and usually have good legal protection for investors. Existing studies on corporate governance have suggested that a

[38]Other approaches include those focused on things such as corporate performance, capital structure, cash holdings and accounting disclosure, etc.

country's political and regulatory environments can significantly influence firms' corporate governance systems (see, for example, La Porta *et al.*, 1997, 1998, 1999, 2000b, 2002b; Volpin, 2002; Pinkowitz *et al.*, 2006; Dittmar *et al.*, 2003). In this sense, the results of top executive performance-turnover drawn from Western economies, like the UK and other European countries, may not hold in China for two reasons. On the one hand, China's immature capital markets are unable to offer investors sound legal protection if judged by Western standards (Firth *et al.*, 2006a). On the other hand, Fan *et al* (2007) argue that in China the majority of firms' shares are concentrated and the state is often the ultimate controller, which would significantly affect the role of the board of directors in monitoring and disciplining top executives.

To bridge the academic gap, recent years have seen a small but ever growing body of literature on the top executive performance-turnover relationship in the Chinese context. For example, Kato and Long (2006) test a sample of Chinese PLCs from 1998 to 2002. They argue that CEO turnover is significantly and inversely related to firm performance. Chi and Wang (2009) explore a dataset of Chinese PLCs, and find evidence that the sensitivity of CEO turnover to performance is weaker in the state-controlled PLCs than in non-state ones. Shen and Lin (2009) use a large sample of PLCs in China for the period 1999 to 2002, and they show that firm profitability and state ownership are inversely related to top management turnover only when firm profitability falls below the target level.

Though those recent studies have greatly improved our understanding with respect to the top executive performance-turnover relationship at Chinese firms, they

actually have flaws of their own and results drawn by them could be rather misleading. It is worth noting that the official classification scheme of shares fails to identify the ultimate controller of Chinese PLCs, as the legal person shares which are deemed to be held by state-owned commercial firms can actually be owned by either private or state entities. Earlier studies using official classification of shares to identify the ultimate controller are therefore expected to render invalid and misleading conclusions. For example, Firth *et al* (2006a) examine the relationship between firm performance, corporate ownership and top management turnover in China, based on the data of the replacement of top management over a five-year period from 1998 to 2002. Applying multinomial logistic techniques to analyse the sample, they find that top management turnover is related to a firm's profitability rather than its stock returns. Moreover, turnover-performance sensitivity is found to be higher in firms where legal entities are major shareholders than in those controlled by the state. Their findings emphasise the monitoring and disciplining role of legal entities in enhancing the turnover-performance sensitivity at Chinese PLCs. However, it should be noted that legal-person shares and tradable shares can be held by a range of heterogeneous entities, ranging from wholly state-owned enterprises to state agencies to private firms.

Some other existing studies see Chinese PLCs as only being controlled by two groups (the state and the private sector) and neglect the fact that the state-controlled PLCs in China are, in reality, controlled by different state entities with different motivations and incentive structures Foe example, Based on a sample comprising all Chinese non-financial companies listed on the Shanghai and Shenzhen Stock Exchanges from 1995 to 2001, Chi and Wang (2009) examine the relationship

between CEO turnover and the corporate performance of Chinese listed companies. They find a negative relationship between the level of pre-turnover profitability and CEO turnover, particularly when firms are incurring losses rather than making profits. In addition, no such relationship is found in state-controlled listed companies. By examining a sample of 638 Chinese listed companies during 1999 to 2002, Kato and Long (2006) find that CEO turnover is more sensitive to corporate performance in privately-controlled companies than in those controlled by the state. Moreover, there is a positive link between ownership concentration and performance-turnover sensitivity in listed companies where the largest owner is a private investor. From the perspective of agency theory, it is imperative to correctly identify both the principal and the agent, in order to ideally solve principal-agent conflicts.

The remainder of this chapter is organised as follows: Section 6.2 provides an overview of theoretical issues relevant to top executive turnover in China. Section 6.3 describes the dataset and the variable constructions. Section 6.4 presents the results. Section 6.5 concludes the chapter.

6.2. Background, corporate governance and top executive turnover

Previous studies have suggested a variety of factors that could potentially affect the sensitivities of top executive turnover to firm performance, such as board structure (see, for example, Weisbach, 1988; Fizel and Louie, 1990; Huson *et al.*, 2001; Laux,2008), top executives' personal characteristics (see, for example, Finkelsteina and D'Aveni, 1994; Fan *et al.*, 2007), top executives' shareholdings (e.g. Dahya *et al.*, 2002; Goyal and Park, 2002), ownership structure (see, for example, Denis *et al.*, 1997; Dahya *et al.*, 1998; Chi and Wang, 2009 ; Shen and Lin, 2009) and legal protection (see, for example, Volpin, 2002; Defond and Hung, 2004), etc. Given the unique institutional characteristics of Chinese capital markets, it seems impossible for Chinese PLCs to rely on external corporate governance mechanisms in disciplining their top executives. The unique institutional characteristics are mainly referred to as the status quo in China, that apart from the weak investor protection in Chinese capital markets, the market for corporate control is actually missing and the managerial labour market is currently immature. Therefore, in contrast to Western economies, Chinese firms' internal corporate governance mechanisms take a more important role in monitoring and disciplining top executives.

This section is intended to briefly discuss related corporate governance issues, as well as provide some background information with respect to top executive turnover at Chinese PLCs.

6.2.1. Performance and top executive turnover

From the perspective of agency theory, the separation of ownership and

management could cause severe performance inefficiency, which has been extensively documented by prior corporate governance studies (see, for example, Jensen and Meckling, 1976; Fama, 1980; Fama and Jensen, 1983a, b). In light of this problem, aligning the interests of the managers with those of shareholders seems to be a quick and effective solution. To this end, a variety of corporate governance mechanisms have been devised to ensure that managers act in the best interests of shareholders. Moreover, from the shareholders' perspective, putting firms in the most capable hands could be equally important, as managers with excellent capabilities are more capable of maximising firm efficiency and profitability. However, it might be quite difficult, if not impossible, and time consuming for shareholders to learn about the managers' ability (Gregory-Smith *et al.*, 2009). Therefore, when it comes to examining whether the management is loyal to shareholders and possesses the capacity to maximise shareholders' wealth, there are no direct quantitative measures. Nevertheless, shareholders can use accounting based and/or market based performance as proxy measures, as the management should be held accountable for a firm's operation performance and rewarded or punished accordingly (Firth *et al.*, 2006a).

There is a perception in existing corporate governance literature that good corporate governance practices should come with inverse sensitivities of performance and top executive turnover, which indicates that a healthy corporate governance system should be effective at disciplining under-performing top executives, and removing them if necessary in extreme cases. An interesting finding in the literature is that such a negative relationship can be found across different corporate governance regimes. Gregory-Smith *et al* (2009) model the

tenure and exit of CEOs from the UK FTSE 350 companies for the period 1996 to 2005, and find the hazard rate of forced departure of CEOs increases with lower firm performance, as measured by total shareholder return. Huson *et al* (2001), using a sample of US companies during the 1971 to 1994 period, report on the negative relationship between the likelihood of CEO turnover and firm performance. Similar empirical results have been obtained by prior studies focused on German and Japanese firms (see, for example, Kaplan, 1994; Abe, 1997; Leker and Salomo, 2000). In China, recent studies also report that for Chinese corporations, unsatisfactory corporate performance often precedes top management turnover (see, for example, Kato and Long, 2006; Firth *et al.*, 2006a; Chi and Wang, 2009; Shen and Lin, 2009; Liao *et al.*, 2009). All of these empirical studies are supportive of agency theory, which argues that it might be imperative to increase the accountability of the management for their firms' performance, and the necessary replacement of incumbent managers could be an effective solution to the agency conflicts between shareholders and the management.

6.2.2. China's economic reform, and the appointment and dismissal of top executive

China's economic reform that began in 1978, aimed at improving SOEs' corporate performance, has deeply changed the corporate governance structure of Chinese SOEs. Central to the economic reform is to introduce Western corporate governance systems/ideas into China, leading to a large wave of privatisation of former Chinese SOEs (Fan *et al.*, 2007). It is worth noting that the privatisation in China is actually partial privatisation, and the state is still the controlling shareholder in many privatised firms. In this sense, the post-1978 economic reform

has not strongly challenged the dominant status of the state in the whole economy, but in reality represents a great opportunity for all firms in China to learn Western business experience and mimic corporate governance structures of their Western counterparts. As a result of the economic reform, the modern enterprise system has started to appear and new Western-style corporate governance structures have been widely adopted in almost all commercial sectors.

As for the corporate governance structure, All Chinese PLCs, regardless of differences in their ownership structures, have similar frameworks for the corporate governance structure, which are largely shaped by the same set of laws and regulations, such as the Company Law (1994), the Securities Law (1999) and the Code of Corporate Governance for Listed Companies (CCGLC, 2002). (Chi and Wang, 2009). The general framework of the corporate governance structure of Chinese PLCs consists of the controlling shareholder, the board of directors, the shareholders' meeting and the management. In the case of appointing new top executives, the corporate governance structure of Chinese PLCs needs to act in the following manner in order to complete the whole process. According to the CCGLC (2002), in strict compliance with the terms and procedures provided for by relevant laws and regulations, the controlling shareholder of a listed company should take initiatives in selecting and nominating the appropriate candidates for the top executive to the board of directors. Then, the board of directors, normally made up of 5 to 19 members, should be responsible for formally nominating its choices to the shareholders' meeting, which has the final say on the matter. Such a process is also applicable to all other relevant issues, such as the reappointment, dismissal and remuneration of the top executive. In addition, the CCGLC (2002)

stipulates that the controlling shareholder should be strictly prohibited from appointing or dismissing the top executive by circumventing the shareholders' meeting or the board of directors. However, it is highly likely that the controlling shareholder of a listed company, by wielding its dominant controlling power, can still easily affect the resolutions on the managerial personnel made by the shareholders' meeting or the board of directors.

6.2.3. Ownership structure and top executive turnover

A key corporate governance mechanism that could affect the likelihood of a change in top executive rests on the ownership structure. Denis *et al* (1997) suggest that various attributes of a firm's ownership structure could have an important impact on internal monitoring efforts, which would in turn affect the incidence of top executive turnover. Compared with counterparts in Western countries, Chinese PLCs often have a concentrated ownership and most of them have a dominant shareholder whose shareholding could far exceed that of any other non-management large shareholders (Hovey and Naughton, 2007). Moreover, a majority of PLCs were profitable carve-outs of SOEs before floating on China's two stock exchanges, and the state often retains a substantial shareholding in these firms even after listing. Due to the large involvement of the Chinese government in the economic reform process, more than 80% of PLCs are actually ultimately controlled by the state. Fan *et al* (2007) suggest that in contrast to the privately controlled Chinese PLCs, PLCs controlled by different state entities may have both profit and non-profit objectives. The private controllers may put pressure on managers of PLCs to increase efficiency and maximise profits and simply judge them from firms' accounting and/or market performance, while the state entities are

supposed to have certain non-profit objectives and the success in meeting these objectives could at least partially determine the overall assessment of the top management.

Liao *et al* (2009) claim that the non-profit objectives are policy burdens imposed on the state-controlled PLCs that mainly arise from three sources: retirement and other welfare costs, redundant workers and the persistence of price distortions. These policy burdens may hold managers of the state-controlled PLCs less accountable for firm performance measures, since the information asymmetry between the management and the state would make it very easy for the management to use policy burdens as the excuse for poor corporate performance (Liao *et al.*, 2009). Also, such information asymmetry makes it rather difficult for the state as the owner to differentiate operational losses from policy-induced losses, which may obscure the true level of agency conflicts between shareholders and the management. It is worth noting that if there are policy-imposed objectives for the state-controlled PLCs, then a weakened relationship between firm performance and top management turnover can be expected. Moreover, unlike private owners whose property rights are well defined and clear-cut, the state, as the owner of Chinese PLCs, is actually the representative of state assets, which theoretically belong to all Chinese citizens. In this sense, the ownership of state assets is highly diffused and in the control of government bureaucrats. Even though some government bureaucrats might be interested in profit-maximisation, due to the diffused ownership, the state's incentive to motivate or discipline managers should always be questioned (Megginson and Netter, 2001). Thus, according to this perspective, there should be weaker performance-turnover sensitivities for the state-controlled

PLCs.

Besides the potential differences in the performance-turnover sensitivities between the state and the private owners of Chinese PLCs, the sensitivities may also differ across various subtypes of state ownership. By tracing up the control chain, I divide Chinese PLCs into five groups according to the type of the ultimate controller. They are the state asset management bureau at the central level (SAMBCG), state asset management bureaus at the local level (SAMBLG), SOEs affiliated to the central government (SOECG), SOEs affiliated to the local government (SOELG) and private investors. Although the first four groups are all state entities, controlled and supervised by either the central government or local governments, their diverse motivations and incentive structures may probably make them act differently on decisions with respect to the appointment and dismissal of the top management.

In terms of the incentive to monitor and discipline the top management, it could be argued that PLCs controlled by SOEs (hereafter, PLCSOEs), including both SOECGs and SOELGs, may have stronger performance-turnover sensitivities of the top executive than those controlled by SAMBs (hereafter, PLCSAMBs), including the SAMBCG and SAMBLGs, for the following two reasons. Firstly, compared with PLCSAMBs, PLCSOEs have enjoyed more autonomous power in deciding their choices of the top management. China's post-1978 economic reform has provided managers of SOEs with the greatest freedom ever to operate firms with profit-maximisation as the top priority. Though the extent to which SOEs are subject to government control remains substantial, the direct involvement or intervention from the state has been greatly minimised, which would in turn give

managers of SOEs more freedom in making the personnel decisions of parent firms as well as those of subordinate listed companies. Unlike PLCSAMBs, whose controlling shareholders are not firms but state bureaus bearing no risk of the consequence of poor performance of their supervised PLCs, PLCSOEs need to consolidate the profit in their parent SOEs' financial reports and thus managers are carefully selected based on their business acumen and receive close monitoring from the controlling shareholders. In stark contrast, in reality, the Party Organisation Department (POD) of the Chinese Communist Party (CCP) and the Chinese Communist Party Committee (CCPC) control the key personnel decisions at the PLCSAMBs, while SAMBs, as the controlling shareholders, are merely 'order takers' after the decisions are made. Moreover, many top executives appointed to the PLCSAMBs are not professional managers but government bureaucrats who are selected based more on political considerations than on business considerations[39]. These bureaucrats are civil cadres on the state payroll whose remuneration and rewards are not paid based on corporate performance only. In reality, as agents of the state, they may probably use firms' resources to fulfill social and political objectives (policy burdens), which would often decrease firms' profit. SAMBs, on the other hand, need to use a complicated assessment package when evaluating the performance of these bureaucrats, and such a package should reflect the evaluation of the completion of both firms' financial and policy goals. Secondly, SAMBs and SOEs, as owners of PLCs, also differ on how closely they monitor the daily operation of the PLCs they control. SAMBs usually oversee

[39] For example, the incumbent CEO of China National Petroleum Corporation (CNPC: SH600028), Mr Jiemin Jiang, was the vice-governor of Qinghai province from 2000 to 2003.

many listed as well as unlisted companies, while it is rare that SOEs are delegated to control a number of companies. In this sense, SOEs could be more capable of closely monitoring the daily operation of their controlled PLCs, which would effectively decrease information asymmetry. In addition, PLCSOEs are often the listed carve-outs of SOEs, and SOEs have the expertise to effectively monitor and correctly evaluate the top executives of PLCSOEs. In contrast, Chen *et al* (2009) point out that the SAMBs' officials typically lack the relevant business knowledge and industry experience to effectively monitor managers of PLCSAMBs, which may lead to a deeper level of information asymmetry between SAMBs and PLCSAMBs. The increased information asymmetry can make it much easier for mangers of PLCSAMBs to use policy burdens as an excuse to avoid the punishment for financial losses, as it is rather difficult for SAMB officials to differentiate between the losses caused by policy burdens and the losses caused by managerial discretion, due to the information asymmetry (Liao *et al.*, 2009).

Empirical studies have shown that distinctions should be made among PLCs controlled by the SAMBCG or SOECGs (hereafter, PLCCGs) and PLCs controlled by SAMBLGs or SOELGs (hereafter, PLCLGs) (see, for example, Chen *et al.*, 2009; Liao *et al.*, 2009). Arguably, such distinctions can make PLCCGs and PLCLGs differ in the top executive performance-turnover sensitivities and I would expect a stronger link for PLCCGs for the following two reasons. Firstly, PLCCGs and PLCLGs differ in the top executive performance-turnover sensitivities in the extent of the monitoring to which they are subject. In comparison with PLCLGs, PLCCGs are usually the largest PLCs in China or PLCs in strategic industries, and thus are subject to much more strict monitoring from their controlling shareholders,

a number of government ministries[40] and the public. According to agency theories, strict monitoring can effectively minimise agency problems caused by the information asymmetry in the sense that losses incurred by managerial discretion can be more easily spotted and the under-performing top executives might then get removed from both inside and outside firms. Secondly, PLCCGs and PLCLGs could also differ in their top executive performance-turnover sensitivities in the extent of the policy burdens to which they are subject. Nowadays, Chinese PLCs typically do not have to bear as many policy burdens as SOEs did before the economic reform. However, policy burdens do still exist implicitly for all state-owned PLCs, and, in reality, PLCLGs typically bear more policy burdens than PLCCGs, particularly in hiring redundant workers and taking account of other social concerns under pressure from local governments in that "the State considers employment and social stability as important measures of local governments' performance... [As] the social security system of China is still immature and often fails in providing sufficient unemployment aids. Severe unemployment and poor social security provision can cause social instability and damage the whole economy" (Liao *et al.*, 2009, p.17). It is worth noting that the policy burdens are a set of multiple objectives imposed by the state that can distract PLCs from maximising firms' profit and the appointment and removal of the top management is based on the PLCs' financial performance evaluation and the evaluation of the completion of the state-imposed policy burdens. Hence, a weaker performance-turnover relationship should be expected for PLCLGs bearing more policy burdens.

[40] For example, the National Audit Office, the Ministry of Finance, the National Economic and Trade Commission and the National Planning and Economic Commission, etc.

Hypothesis 1: In contrast with private owners, the state controlling entities are supposed to have certain non-profit objectives which would at least partially determine the overall assessment of the top management in those state-controlled PLCs. In this sense, compared with their privately-owned counterparts, there should be weaker performance-turnover sensitivities and less CEO turnover for the state-controlled PLCs.

Hypothesis 2: Among state-controlled PLCs, in terms of the incentive to monitor and discipline the top management, PLCs controlled by SAMBs have weaker performance-turnover sensitivities than those controlled by SOEs. In addition, in terms of policy burdens they are subject to, PLCs controlled by state entities affiliated to the central government are expected to have stronger performance-turnover sensitivities than those controlled by state entities affiliated to local governments.

6.2.4. Board structure[41] and top executive turnover

The board of directors is considered to be an important internal corporate governance mechanism, particularly due to the fact that the market for corporate control as a major source of external control is currently not in place in China. It is argued that independent directors are likely to be more effective at monitoring the top managers than inside directors (Huson *et al.*, 2001). Kato and Long (2006) argue that the most direct and effective way for the controlling shareholders to

[41] The existing literature usually uses three measures to describe the board structure: board size, board independence, and board leadership (whether the CEO is also the chairman of the board of directors). The board leadership can also be considered to be in relation to a top executive's personal characteristics, and hence in this study it is not discussed in this section. Instead, I include it as a major aspect of a top executive's personal characteristics or personal power.

exert influence over firms' daily operations is by appointing firms' top executives, and these inside top executives are expected to work in the interests of the controlling shareholders rather than those of the minority shareholders. Moreover, in a firm, directors may lack the incentive to monitor the management when their careers are tied to the controlling shareholder, or they have strong personal ties with the incumbent top executive. Thus, an under-performing top executive may be protected and remains in control if the board of directors is insider-dominated.

The existing literature has shown that it is easier for the controlling shareholder to reap large private benefits if there are more inside directors sitting on the board, while the presence of independent directors can help effectively curb insiders' expropriation of minority shareholders wealth (Weisbach, 1988; Hermalin and Weisbach, 2003). Fama (1980) suggests that independent directors tend to have incentives to develop their reputations in the managerial labour market by providing strict monitoring efforts. According to the above reasoning, the presence of independent directors can significantly enhance the monitoring effects of the board: the greater percentage of independent directors serving on the board, the better oversight quality the board will provide. A number of prior studies have documented a positive relationship between the percentage of independent directors and the likelihood of high top executive turnover (see, for example, Fan *et al.*, 2007). In light of the more active monitoring role that independent directors could play in the corporate governance system, the CSRC's 'Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies' (enacted in 2001) stipulated that independent directors in any PLC should make up no less than one third of directors serving on the board by 30th June, 2003.

Prior studies have also found that the size of the board of directors may affect performance-turnover sensitivities of the top executive (see, for example, Jensen, 1993; Yermack, 1996). However, they have not reached a uniform conclusion on this issue. Fan *et al* (2007) argue that it would be easier for top executives to foster closer ties with board directors in firms with smaller boards, which could probably render the boards' monitoring efforts less effective. For this reason, a less significant link between corporate performance and top executive turnover might be observed for firms with smaller boards. Jensen (1993) and Yermack (1996), however, suggest that larger boards are less effective monitors of top executives and can be more easily captured by them.

6.2.5. Top executive characteristics and turnover

In the existing literature the characteristics of a top executive are often considered in four areas, which are top executive's age, duality, tenure and compensation. It is argued that the age of the top executive is less likely to be related to the performance-forced turnover (Farrell and Whidbee, 2003). Goyal and Park (2002) suggest that this is because top executives aged around 65 are more likely to step out of firms due to normal retirements than to performance-forced turnovers. Previous studies have found a strong relationship between top executive tenure and turnover (see, for example, Salancik and Meindl, 1984; Goyal and Park, 2002; Gregory-Smith *et al.*, 2009). However, the exact relationship between these two issues is not clear-cut, as top executive tenure could affect the top executive turnover either positively or negatively. Allgood and Farrell (2000) provide two possible explanations for such a varying relation. They argue that, on the one hand, tenure provides a top executive with time to capture the board using control of

information and board appointments, aligning directors serving on the board and making the board more favourably disposed towards him or her. If this is true, then the expected top executive turnover will decrease with tenure. On the other hand, they suggest that what a board learns about a top executive's ability over time may have a variable impact on top executive turnover according to performance. A board of directors may know little about a newly appointed top executive's ability, and there is plenty of information asymmetry between the top executive and the board. However, such information asymmetry about the appointed top executive's ability would diminish over time, hence a poor level of performance might be acceptable to the board in the top executive's early tenure, but the same level would tend to be seen as under-performing later in his or her tenure. In this sense, the performance-turnover sensitivities of the top executive may become increasingly stronger with the tenure.

The top executive duality means that the top executive is designated as the CEO and chairman of the board of directors at the same time. 'The Code of Best Practice' issued by the Cadbury Committee in December 1992 recommends that the positions of CEO and Chairman of the board should not be held by one individual, as a board that is more independent from the management is more capable of providing effective monitoring of the firm. Dahya *et al* (2002) suggest that a top executive holding both the CEO and chairman of the board positions would have more power to exert influence in the boardroom and entrench himself or herself at the firm over the course of the tenure. Also, the top executives with dual roles may face a lower risk of turnover than those holding only one position (Shen and Lin, 2009).

From the perspective of agency theory, the top executive compensation that is widely measured by stock ownership is argued to be an effective way to align the interests of shareholders and those of the management (Jensen and Murphy, 1990). Moreover, Denis and Sarin (1999) argue that a top executive with larger ownership tends to have more power to affect the board's decisions. It is likewise reasonable to assume that large managerial ownership can limit the power of the boards to monitor and discipline under-performing top executives. If the above reasoning holds, a negative relationship between the top executive compensation and turnover would be expected. In the case of Chinese PLCs, however, the level of executive stock ownership is fairly low, and on average represents merely 0.3 per cent of total outstanding shares in my sample. Thus, I would not expect a significant relationship between the top executive compensation and turnover at Chinese PLCs.

6.3. Data and variable construction

6.3.1. Data

To investigate the performance-turnover sensitivities of top executives at Chinese PLCs, I gathered a sample of Chinese PLCs from the Shanghai Wind information database. The original sample for this study consists of all A-share PLCs listed on The Shanghai Stock Exchange (SHSE) and The Shenzhen Stock Exchange (SZSE) from 2001 to 2007, subject to data availability. As in the previous two empirical chapters, the customised dataset provided by Sinofin Financial Information Service Co., Ltd. helps identify the type of the ultimate controller of each Chinese PLC and allows me categorise these ultimate controllers into five groups: the state asset management bureau at the central level (SAMBCG), the state asset management

bureaus at the local level (SAMBLG), state-owned enterprises (SOEs) that are affiliated to the central government (SOECGs) and those affiliated to the local governments (SOELGs), and private investors. In addition, reasons for the top executive turnover are supplemented by GTA IT Co., Ltd[42].

The initial sample has 9289 observations. The sample screening process is as follows: (1) Exclude firms for which corporate performance data is not available and follow the tradition of the literature to remove financial firms, due to them using a different financial reporting system(1270 observations dropped); (2) Drop firms whose leverage ratio is greater than one(2 observation dropped); (3) Eliminate firms with ST (Special Treatment) or PT (Particular Treatment) designation(1774 observations dropped); (4) Delete firms with stated reasons for top executive turnover being 'Retirement', 'Change in controlling shareholders', 'Legal disputes', 'Completion of acting duties' and 'No reason given'(171 observations dropped). As a result, the final sample is an unbalanced panel that consists of 6072 firm-year observations, and there are 1052 firms in the sample.

6.3.2. Variable construction

6.3.2.1. Dependent variable and classification of top executive turnovers

The GTA IT Co., Ltd provides information on the reasons reported for CEO turnover, if any: (1) Change of job, (2) Retirement, (3) Contract expiration, (4) Change in controlling shareholders, (5) Resignation, (6) Dismissal, (7) Health, (8)

[42] GTA (www.gtadata.com) is a leading global provider of China financial market data, China industries and economic data.

Personal reasons, (9) Corporate governance reform[43], (10) Legal disputes, (11) Completion of acting duties[44], (12) No reason given. Table 6.1 summarises the distribution of CEO turnover across different stated reasons for the sample observations. Among all stated reasons for turnover, 'Change of job' is the most common reason, and Table 6.1 shows there are 729 turnovers (accounting for about 39.7% of turnovers) labelled as 'Change of job'. The second most commonly stated reason is 'Resignation', which accounts for around 22% of all turnovers over the sample period. The third most commonly stated reason is 'Contract expiration', which accounts for approximately 18.5% of turnovers. According to Table 6.1, the least commonly given reason for a turnover is 'Legal disputes', and only 3 turnovers fall into this category.

Since the investigation of the top executive performance-turnover sensitivity is aimed at assessing the effectiveness of the corporate governance mechanism of Chinese PLCs in cases of CEO turnover, I exclude CEO turnovers for which the stated reasons are 'Retirement', 'Legal disputes' and 'Completion of acting duties', as these turnovers are not directly related to the disciplinary efforts exercised by shareholders. I also exclude CEO turnovers for which the stated reason is 'change in controlling shareholders', due to too few observations (11 cases) falling into this category. 'Health' and 'Personal reasons' are combined into one category, as a

---

[43] This refers to two unique types of turnovers at Chinese PLCs. The first type involves the separation of the chairman of the board and CEO roles, i.e., a person who previously held both positions of the chairman of the board and CEO resigns from the managerial position, but retains the chairman position. The second type results from the regulations stipulated by the CSRC in 1998 that senior managers of Chinese PLCs should not hold senior managerial positions in the parent firms.

[44] This refers to the situation that someone (often the chairman of the board) acts as the CEO on a temporary basis. For example, the chairman of the board temporarily takes over the CEO's responsibilities after the former CEO resigns from the managerial position until the new CEO is in place.

health reason is a personal reason. The new 'Personal reasons' category contains all of the observed cases from the original two categories. My final sample contains 6 categories of turnover: 'Change of job', 'Contract expiration', Resignation', 'Dismissal', 'Personal reasons' and 'Corporate governance reform', and includes 1664 cases of CEO turnovers, representing 90.7% of all turnovers over the sample period. The Panel B of Table 6.1 summarises the distribution of CEO turnover across different stated reasons for the final sample.

I intend to stick to the publicly stated reasons for CEO turnovers when investigating the top executive performance-turnover sensitivity at Chinese PLCs, and relative considerations in identifying the final sample are provided in details as follows. When investigating the link between top executive turnover and firm performance, prior research has suggested that it is imperative to distinguish between forced and normal turnovers (see, for example, Weisbach, 1988; Parrino, 1997; Farrell and Whidbee, 2003). Chang and Wong (2009) argue that only the forced turnovers can reflect the disciplinary efforts of shareholders, and distinguishing between forced and normal turnovers can enable researchers to more effectively assess the quality of firms' corporate governance systems. However, it may sometimes be rather difficult to distinguish between forced and normal turnovers based upon publicly disclosed information (see, for example, Denis and Denis, 1995; Farrell and Whidbee, 2003). To deal with this problem, Shen and Lin (2009) apply the behaviour theory of organisational search to clarify the relationship between top management turnover and firm profitability[45]. However,

[45] According to the behaviour theory, when firm performance meets the target level, firms are

their attempt to classify turnover types can lead to erroneous conclusions, as distinguishing between forced and normal turnovers based on firm performance could potentially fix the estimation results, especially when the firm performance is also used as a key independent variable in the analysis. Moreover, there is little information available that can help researchers to clearly determine whether a turnover is forced or normal. Dividing CEO turnovers into forced and normal turnovers based on publicly disclosed information is just asking too much of the existing data. For example, 'Resignation' is one of the most commonly stated reasons for CEO turnovers in the sample and can either be seen as a normal turnover or a forced turnover. It is a normal turnover if the departing CEO voluntarily resigns and then takes up a new job somewhere else, while it is a forced one if the CEO departure is performance-related. Hence, in the case of 'Resignation', whether the turnover is normal or forced really depends on the destination of the departing CEO. However, it is difficult to obtain information with respect to the destination of the departing CEO. It is also worth noting that lumping CEO turnovers roughly into two groups would probably obscure the true story behind them. At the same time, there are good reasons to suspect that the likelihood of CEO turnover tends to vary depending on multiple types of risk to which the CEO is exposed, and exploiting the publicly stated reasons for CEO turnover might potentially represent a good opportunity to draw a complete image for CEO turnovers at Chinese PLCs. For example, an increase in the CEO's age might

---

unlikely to dismiss their incumbent CEOs, and CEO turnovers should not be considered as forced under satisfactory performance. In contrast, when firm performance falls below the target level, firms may seek forced CEO turnovers which represent an important organisational change that can lead to enhanced prospect of returning performance to the target level.

increase the likelihood of CEO turnover in cases for which the stated reasons are 'Personal reasons', 'Contract expiration' and 'Retirement'. However, it might not be closely associated with CEO turnovers in cases for which the stated reasons are 'Dismissal' and 'Corporate governance reform'.

Table 6.1 Stated reasons for CEO turnovers

Panel A								
Stated reasons for CEO turnover	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**Total**
Change of job	94	73	96	141	134	101	90	729(39.72%)
Retirement	2	1	7	0	4	4	6	24(1.31%)
Contract expiration	32	56	68	29	61	46	48	340(18.53%)
Change in controlling shareholders	0	0	4	1	1	1	4	11(0.60%)
Resignation	49	101	53	41	52	40	67	403(21.96%)
Dismissal	9	9	7	13	6	6	7	57(3.11%)
Health	6	5	7	8	5	5	6	42(2.29%)
Personal reasons	1	3	2	5	8	17	10	46(2.51%)
Corporate governance reform	20	6	8	3	1	4	5	47(2.56%)
Legal disputes	1	0	0	0	0	1	1	3(0.16%)
Completion of acting duties	5	1	2	4	1	9	3	25(1.36%)
No reason given	32	20	20	2	6	9	19	108(5.89%)

Total	251 (13.68%)	275 (14.99%)	274 (14.93%)	247 (13.46%)	279 (15.20%)	243 (13.24%)	266 (14.50%)	1835 (100%)
Panel B								
Stated reasons for CEO turnover	**SOELG**	**SAMBLG**	**PRIVATE**	**SAMBCG**	**SOECG**	**Total**		
Change of job	203	206	192	52	76	729(43.81%)		
Resignation	122	95	125	22	39	403(24.22%)		
Personal reasons	19	19	43	1	6	88(5.29%)		
Dismissal	17	20	13	1	6	57(3.43%)		
Contract expiration	91	100	99	16	34	340(20.43%)		
Corporate governance reform	15	11	12	2	7	47(2.82%)		
total	467(28.1%)	451(27.1%)	484(29.1%)	94(5.6%)	168(10.1%)	1664(100%)		

Notes: The Panel A of this table summarises the distribution of CEO turnover across different stated reasons for the sample observations, and the Panel B summarises the distribution of CEO turnover across different stated reasons for the final sample.

6.3.2.2. Characteristics of top executive

The objective of this chapter is to investigate top executive turnover at Chinese PLCs and identify the determinants of turnover. The CEO is considered to be the top executive of a PLC in this study. Note that the existing literature typically defines a CEO as the top executive of a firm. The existing literature suggests that top executives' personal characteristics will probably affect the likelihood of turnover, so I introduce a set of control variables to analyse such possible effects. In the follow analysis, I control for CEOs' age (AGE), duality (DUALITY), tenure (TENURE) and compensation (COMPENSATION).

6.3.2.3. Firm performance

I use three measures of firm performance: return on assets (ROA), return on equity (ROE) and return on sales (ROS). All three variables are lagged one period[46] and adjusted for industry medians, where industry sectors are in accordance with the industry classification codes stipulated by the CSRC in 2001. The measures of firm performance are adjusted for the industry median: this process involves subtracting the industry median from all measures to give an adjusted value, and it would minimise possible influences of some unobservable effects. The multinomial logistic estimator cannot deal with these unobservable effects as well as GMM estimator adopted in two previous empirical chapters. This is why I take this adjustment in the third empirical chapter.

Market based measures of firm performance are not used here due to market

[46] This is due to the possible lag between a CEO's performance evaluation and actual decisions on turnover.

manipulations and high volatility in the Chinese stock market (Fan *et al.*, 2007). More importantly, the market based measures of firm performance are less effective at reflecting actual firm performance for Chinese PLCs, as not all outstanding shares are tradable on the two Chinese exchanges (Chang and Wong, 2009).

6.3.2.4. Ownership and ownership-related control variables

In line with the two previous empirical chapters, all sample observations are classified into five groups according to the identity of the ultimate controller of each Chinese PLC. They are the state asset management bureau at the central level (SAMBCG), the state asset management bureaus at the local level (SAMBLG), state-owned enterprises that are affiliated to the central government (SOECGs) and those affiliated to the local governments (SOELGs), and private investors (PRIVATE). Only four dummy variables are used in the analysis to avoid the problem of dummy trap, and the private investor variable is the reference group.

In addition, prior studies also suggest that the ownership concentration tends to have effects on top executive turnover. One prominent feature of the Chinese stock market is the highly concentrated ownership structure. La Porta *et al* (1999) argue that the highly concentrated ownership structure is the consequence of weak protection for investors. Ownership structure could have an important impact on firms' internal monitoring efforts. According to Shleifer and Vishny (1986), a highly concentrated ownership structure can provide the controlling shareholder with more incentives to monitor managerial performance, which would result in stronger performance-turnover sensitivities. To control for the ownership

concentration, the variable TOPONE, measured by the percentage of shares held by the largest shareholder, is used as the proxy of the ownership concentration. Moreover, the quadratic term TOPONE (TOPONE2) is also included to capture any curvilinear effects the ownership concentration may have on the likelihood of top executive turnover at Chinese PLCs. In addition, Denis *et al* (1997) suggest that non-management blockholdings can reduce the degree of managerial entrenchment, and thus lead to an increased rate of management turnover. Bloch and Hege (2001) show that the presence of such blockholders could be an effective way of enhancing internal monitoring and limiting private benefits. Hence, the variable TOP4_1, which is a ratio measured by the percentage of total shares held by the other top four shareholders over that held by the largest shareholder, is used to reflect the power of non-management blockholdings in disciplining the top management, and a positive relationship between TOP4_1 and turnover would be expected.

6.3.2.5. Other control variables

As for the impact of the board of directors on top executive turnover, I use two variables to control for this. The first one is board size (BOARDSIZE), measured by the total number of directors serving on the board, and the second is the percentage of independent directors of the board (INDEPENDENT). Moreover, I control for two other important firm characteristics in the following analysis, which are capital structure (LEV) and firm size (SIZE). A firm's capital structure is measured by its leverage ratio, and a higher leverage ratio means more borrowings from outside the firm. Jensen (1986) emphasises the important role debt creation could play in disciplining and motivating the management. Firms with increased

debts will attract more external monitoring from debt-issuers. In this sense, firms with higher leverage ratios may experience more top executive turnovers. Firm size (SIZE) is also an important firm characteristic that should be taken into account when investigating the top executive turnover. Dalton and Kesner (1983) suggest that it could be much easier for managers to get themselves entrenched in larger firms. Berry *et al* (2000) suggest that entrenched managers in larger firms are less likely to be deemed incompetent. Hence, firm size (SIZE), measured as a natural logarithm of total assets of firms, is controlled in the analysis, and a negative link between firm size (SIZE) and top executive turnover may exist for Chinese PLCs.

Table 6.2 provides a brief explanation for the dependent variables as well as all independent variables. Panel A of Table 6.3 presents a detailed distribution of the sample of Chinese PLCs used in the analysis according to firms' ultimate controllers, and the balance of the panel is stated in panel B. It is clear from the table that the state is still in control of the majority of all Chinese A-share PLCs, with four different state entities controlling around 80% of Chinese PLCs in total.

Table 6.2 Summary of variables

Variable Name	Variable Definition	Expected Sign
CT	Dummy variable denotes CEO turnover	
PERF	ROA, ROE and ROS, all lagged one period and adjusted by industry medians	-
AGE	CEO's age	+
TENURE	CEO's tenure	+/-
COMPENSATION	The percentage of shares held by a CEO	-
LEV	Ratio of total liabilities over total assets	+
SIZE	Natural logarithm of total assets of firms	-
SAMBCG	Dummy variable coded 1 if the ultimate controller is the SAMBCG; otherwise 0	-
SAMBLG	Dummy variable coded 1 if the ultimate controller is an SAMBLG; otherwise 0	-
SOECG	Dummy variable coded 1 if the ultimate controller is an SOECG; otherwise 0	-
SOELG	Dummy variable coded 1 if the ultimate controller is an SOELG; otherwise 0	-
BOARDSIZE	Size of board (number of directors)	+/-
INDEPENDENT	Ratio of the number of independent directors to the number of directors	+
DUALITY	Dummy variable coded 1 if board chairman is the CEO; otherwise 0	-
TOPONE	The percentage of shares held by the largest shareholder	+/-
TOPONE2	Quadratic term of TOPONE	+/-
TOP4_1	Ratio measured by the percentage of total shares held by the other top four shareholders over that held by the largest shareholder.	+

Notes: Real variables are deflated using the China's annual CPI.

Table 6.3 Summary of the distribution of sample observations

Panel A: sample distribution per year						
Year	**SOELG(Obs.)**	**SAMBLG(Obs.)**	**PRIVATE(Obs.)**	**SAMBCG(Obs.)**	**SOECG(Obs.)**	**Total**
2001	399	168	75	0	115	757(12.5%)
2002	432	162	109	0	127	830(13.7%)
2003	293	233	182	3	135	846(13.9%)
2004	154	345	233	71	91	894(14.7%)
2005	172	352	236	79	90	929(15.3%)
2006	111	356	271	99	74	911(15%)
2007	78	366	279	139	43	905(14.9%)

Total(Pct)	1639(27.0%)	1982(32.6%)	1385(22.8%)	391(6.4%)	675(11.1%)	6072(100%)

Panel B: balance of the panel

Number of observations	Number of firms
1	30
2	38
3	82
4	78
5	96
6	172
7	556

Notes: (1) SAMBCG is the state asset management bureau at the central level, SAMBLG is state asset management bureaus at the regional level,SOECG is an SOE supervised by the central government, SOELG is an SOE supervised by the regional government and PRIVATE is a Private investor; (2) Percentages are in brackets.

6.3.2.6. Summary statistics

Table 6.4 presents the descriptive statistics of total firm-year observations during the period 2001 to 2007, and the Correlation matrix for the variables is included in Table A6.1 in the Appendix.

Only accounting-based performance variables are adopted in this study because they are more reliable performance indicators in the Chinese stock market. The means of the industry median-adjusted firm performance variables are -0.0091 (ROAI), -0.0334 (ROEI) and -0.0601 (ROSI). Among all PLCs, on average, those controlled by SAMBCG have the best corporate performance, with the mean of ROAI, ROEI and ROSI being -0.0007,-0.0237 and -0.0049, respectively. PLCs controlled by SOECG, as a whole, is the second best group in terms of corporate performance. The average age of the CEOs of Chinese PLCs is 47 years, with a range from 28 years to 67 years. On average, a CEO's tenure is approximately 3.5 years. It seems that the CEO tenure is quite low in China as compared to other countries (e.g. the UK and the US), and it may be due to the short history of the Chinese stock market. The statistics also indicate that the executive incentive scheme is not popular in China, as the mean shareholding by CEOs at Chinese PLCs is merely 0.08%.

On average, there are around 10 directors serving on the board, and one third of them are independent directors, which is strictly in line with the 'Guideline for introducing Independent Directors to The Board of Directors of Listed

Companies'[47] stipulated by the CSRC in 2001. The CEO is disclosed to also hold the position of board chairman in 8.48% of sample PLCs. The mean shareholding by the largest shareholders is approximately 41%, indicating that one thing PLCs in China have in common is a highly concentrated ownership structure.

[47] The Guideline requires that independent directors should make up at least one third of directors sitting on the board in any listed company by 30th June, 2003.

Table 6.4 Descriptive statistics of the sample

	Variable	Number of Observations	Mean	Standard Deviation	Min	Median	Max
Total	ROAI	6072	-0.0091	0.0757	-0.6747	0.0002	0.1598
	ROEI	6072	-0.0334	0.2555	-1.9079	0	1.3116
	ROSI	6072	-0.0601	0.4844	-6.6916	0.0003	0.6761
	SIZE	6072	21.2241	1.0122	12.3143	21.1378	27.3005
	LEV	6072	0.5015	0.1908	0.0829	0.5097	0.98
	AGE	6072	47.1299	6.3186	28	47	67
	TENURE	6072	3.4777	2.1547	0.1	3	15
	COMPENSATION	6072	0.0008	0.0104	0	0	0.2625
	BOARDSIZE	6072	9.6891	2.2376	2	9	23
	DUALITY	6072	0.0848	0.2786	0	0	1
	INDEPENDENT	6072	0.2906	0.1205	0	0.3333	0.75
	TOPONE	6072	0.4115	0.1678	0.006	0.3947	0.85
	TOP4_1	6072	0.5365	0.5492	0.0019	0.3375	3.2998
SAMBLG	ROAI	1982	-0.0084	0.0665	-0.657	-0.0009	0.1527
	ROEI	1982	-0.0303	0.219	-1.8902	-0.0024	1.2843
	ROSI	1982	-0.0446	0.3959	-6.6539	-0.0026	0.6655
	SIZE	1982	21.407	0.9194	14.9374	21.3663	24.7779
	LEV	1982	0.5067	0.1799	0.0829	0.5199	0.98
	AGE	1982	48.0459	5.9884	30	48	66
	TENURE	1982	3.6591	2.2068	0.25	3	14
	COMPENSATION	1982	0	0.0001	0	0	0.0025
	BOARDSIZE	1982	9.7321	2.1705	4	9	21
	DUALITY	1982	0.0938	0.2917	0	0	1

	INDEPENDENT	1982	0.3046	0.111	0	0.3333	0.6
	TOPONE	1982	0.4202	0.1585	0.0355	0.4079	0.8245
	TOP4_1	1982	0.4408	0.4912	0.003	0.2417	2.8885
SOELG	ROAI	1639	-0.0075	0.0693	-0.6564	0.0014	0.1516
	ROEI	1639	-0.0333	0.2442	-1.8879	0.0016	1.2851
	ROSI	1639	-0.0401	0.4217	-6.6894	0.002	0.6497
	SIZE	1639	21.1548	0.8527	18.5038	21.1328	24.3913
	LEV	1639	0.4812	0.1857	0.0829	0.4797	0.98
	AGE	1639	47.3636	6.7854	30	47	65
	TENURE	1639	3.5416	2.1845	0.1	3	14
	COMPENSATION	1639	0	0.0003	0	0	0.01
	BOARDSIZE	1639	9.8041	2.2796	2	9	20
	DUALITY	1639	0.0744	0.2626	0	0	1
	INDEPENDENT	1639	0.2387	0.1373	0	0.2857	0.6
	TOPONE	1639	0.4459	0.1732	0.006	0.4542	0.8485
	TOP4_1	1639	0.488	0.5688	0.0025	0.228	3.2694
PRIVATE	ROAI	1385	-0.0182	0.0987	-0.6747	0	0.1587
	ROEI	1385	-0.0521	0.3369	-1.9079	0.0006	1.3116
	ROSI	1385	-0.1381	0.7396	-6.6916	0.0072	0.6761
	SIZE	1385	20.8163	0.9375	12.3143	20.8278	23.5755
	LEV	1385	0.5457	0.1972	0.0829	0.5529	0.98
	AGE	1385	44.8448	5.9982	28	44	65
	TENURE	1385	3.0102	1.9623	0.1	2.57	15
	COMPENSATION	1385	0.0031	0.0214	0	0	0.2625
	BOARDSIZE	1385	9.0238	2.0849	4	9	23
	DUALITY	1385	0.1112	0.3145	0	0	1
	INDEPENDENT	1385	0.3325	0.0907	0	0.3333	0.75
	TOPONE	1385	0.3145	0.129	0.0324	0.2858	0.8147
	TOP4_1	1385	0.8018	0.5592	0.0065	0.7614	3.2998

SAMBCG	ROAI	391	-0.0007	0.0632	-0.436	0.0001	0.1598
	ROEI	391	-0.0237	0.2333	-1.8853	0.0017	1.253
	ROSI	391	-0.0049	0.1549	-1.1934	0.0009	0.6685
	SIZE	391	21.9149	1.3814	18.6757	21.6355	25.9615
	LEV	391	0.5072	0.1976	0.0829	0.526	0.98
	AGE	391	48.133	4.8498	36	48	62
	TENURE	391	3.4001	1.9237	0.5	3	10.3
	COMPENSATION	391	0.0001	0.0022	0	0	0.0434
	BOARDSIZE	391	10.0563	2.1042	5	9	19
	DUALITY	391	0.046	0.2098	0	0	1
	INDEPENDENT	391	0.3394	0.0678	0	0.3333	0.5556
	TOPONE	391	0.4563	0.1474	0.1442	0.4615	0.85
	TOP4_1	391	0.395	0.4283	0.0068	0.2161	2.0648
SOECG	ROAI	675	-0.001	0.0663	-0.6625	0.0041	0.1587
	ROEI	675	-0.0098	0.1898	-1.5905	0.0018	1.2865
	ROSI	675	-0.0259	0.2578	-2.9625	-0.0002	0.6714
	SIZE	675	21.2926	1.1557	18.6019	21.0725	27.3005
	LEV	675	0.4415	0.1945	0.0829	0.4347	0.98
	AGE	675	47.9807	6.3399	29	47	67
	TENURE	675	3.7944	2.2807	0.2	3.1	11
	COMPENSATION	675	0.0003	0.0038	0	0	0.0598
	BOARDSIZE	675	10.4356	2.3562	5	10	19
	DUALITY	675	0.0519	0.2219	0	0	1
	INDEPENDENT	675	0.2614	0.1277	0	0.3333	0.6
	TOPONE	675	0.4753	0.1803	0.0956	0.4625	0.85
	TOP4_1	675	0.4729	0.5295	0.0019	0.238	3

Notes: This table shows the sample characteristics for Chinese PLCs over the period 2001 to 2007.

6.3.3. Methodology

6.3.3.1. Binary Choice and Binomial Logistic Model

In many situations we need to model an economic outcome that is not a continuous measure of some activity, but discrete choices among a series of alternatives, for example, modelling labour force participation, purchasing a new car or the decision of whether or not to go to a college. There are a number of different types of model that can be used to model and analyse such discrete choices, and many of them are known as qualitative response models. Moreover, what the qualitative response models have in common is that their dependent variables are indicators of discrete choices.

Many qualitative response models are those for which the dependent variable takes values that are only coded for some qualitative outcomes, such as a 'yes or no' decision. Now, consider the most basic model of which the dependent variable only takes binary (0/1) choices, for example, to model the labour force participation we conduct a survey for a number of respondents in a given period and then equate their decisions, i.e. 'works or seeks work' and 'does not', with 1 and 0, respectively. In such a case, the 0/1 coding representing decisions of qualitative choices is merely for the purpose of convenience. It is believed that a set of factors such as age, education, marital status and number of children can have some effects on a respondent's decision of whether or not to work, so:

$$\text{Prob}(Y = 1|x)=F(x, \beta)$$

$$\text{Prob}(Y = 0|x)=1-F(x, \beta)$$

The vector contains all factors that are believed to affect respondents' decisions, and the set of parameters β reflects the impact of changes in x on the probability.

We first model the above equations with the linear regression, that is:

$F(x, \beta) = x'\beta$

Since $E[y|x] = F(x, \beta)$, the regression model is therefore constructed as follows:

$y = E[y|x] + (y - E[y|x]) = x'\beta + \varepsilon$

The linear regression model above, however, has many shortcomings. To name but two, ε is heteroscedastic in a way that depends on β. Because $x'\beta + \varepsilon$ must equal 0 or 1, ε equals $-x'\beta$ or $1 - x'\beta$, with probabilities 1-F and F, respectively. Hence the variance of ε, $Var[\varepsilon|x] = x'\beta(1 - x'\beta)$ obviously depends on β. Another major flaw is that we cannot contain the predicated probabilities of the model within the 0-1 interval.

In principle, our requirement is to find a model that will produce predictions consistent with the general framework of probability models as given by Greene (2008): Prob(event j occurs) = Prob(Y = j) =F[relevant effects, parameters]. Moreover, the predicted probabilities should be constrained to the 0-1 interval. Hence, for a given regressor vector, two conditions would be expected:

$$\lim_{x'\beta \to +\infty} \text{Prob}(Y = 1|x) = 1$$

$$\lim_{x'\beta \to -\infty} \text{Prob}(Y = 1|x) = 0$$

In principle any proper and continuous probability distribution defined over the real line to have the property that meets the above two conditions will suffice. The logistic distribution, partly because of its mathematical convenience, has been widely used in practice. The logistic distribution:

$$\text{Prob}(Y = 1|x) = \frac{e^{x'\beta}}{1 + e^{x'\beta}} = \Lambda(x'\beta) \qquad \text{(a)}$$

has been used in many applications, which gives rise to the binomial logistic model.

6.3.3.2. Multinomial Logistic Model

It would be interesting to consider the situation where we have more than two outcomes. Consider the outcomes 0, 1, 2, 3,... ..., m recorded in y, and the vector X consisting of all explanatory variables. The model for such outcomes is:

$$\text{Prob}(Y = j)=\frac{e^{\beta_j' X}}{\sum_{k=0}^{m} e^{\beta_k' X}}, \text{ j=0, 1... ..., m.} \qquad \text{(b)}$$

This model is a multinomial logistic model, and the binomial logistic model I have discussed before can be seen as a special case of this multinomial logistic model if J=1. In a multinomial logistic model, even though the outcomes are coded as 0, 1, 2, 3....., m, these numerical values are arbitrary because it does not necessarily mean that, for example, the outcome coded m is better than the outcome coded m-1, the outcome coded 3 is better than the outcome coded 2, and the outcome coded 2 is better than the outcome coded 1. Such an unordered property of Y distinguishes the use of the above multinomial logistic model from regression models that are appropriate for continuous dependent variables and from ordered logistic models that are appropriate for ordered categorical data.

Without loss of generality, consider an example that has three outcomes or choices: outcome coded 1(buy an American car), outcome coded 2 (buy a European Car) and outcome coded 3 (buy a Japanese car). In the multinomial logistic model a set of coefficients, β_j, j=1,2, and 3, corresponding to each outcome will be estimated:

$$\text{Prob}(Y = 1)=\frac{e^{\beta_1' X}}{e^{\beta_1' X}+e^{\beta_2' X}+e^{\beta_3' X}}$$

$$\text{Prob}(Y = 2)=\frac{e^{\beta_2' X}}{e^{\beta_1' X}+e^{\beta_2' X}+e^{\beta_3' X}}$$

$$\text{Prob}(Y = 3) = \frac{e^{\beta_3' X}}{e^{\beta_1' X} + e^{\beta_2' X} + e^{\beta_3' X}}$$

However, the above model is not uniquely identified in the sense that there is more than one solution to the estimated coefficients β_j that leads to the same probabilities for three outcomes. A convenient normalisation that helps solve the problem is to arbitrarily set one of β_j j=1, 2, and 3, to 0. For example, if setting β_1=0, the equations become:

$$\text{Prob}(Y = 1) = \frac{1}{1 + e^{\beta_2' X} + e^{\beta_3' X}}$$

$$\text{Prob}(Y = 2) = \frac{e^{\beta_2' X}}{1 + e^{\beta_2' X} + e^{\beta_3' X}}$$

$$\text{Prob}(Y = 3) = \frac{e^{\beta_3' X}}{1 + e^{\beta_2' X} + e^{\beta_3' X}}$$

Then the remaining coefficients β_2 and β_3 will measure the change relative to the Y=1 group. This is because only m parameter vectors are needed in order to determine m+1 probabilities. By the same token, for a model that has m+1 outcomes, i.e. 0, 1, 2, 3,....., m, if I set $\beta_0 = 0$, the probabilities for each outcome will be :

$$\text{Prob}(Y = j|X) = \frac{e^{\beta_j' X}}{1 + \sum_{k=1}^{m} e^{\beta_k' X}}, \text{ j=0, 1... ..., m.} \qquad \text{(c)}$$

6.4. Empirical tests and results

6.4.1. Regression models

In the following analyses, I intend to use multinomial logistic regression models to examine the top executive performance-turnover sensitivities at Chinese PLCs, as well as the determinants of turnover. Based on the existing literature on top executive turnover and my understanding of the unique features in the Chinese stock market, I include in regression models a number of factors that could potentially affect the likelihood of top executive turnover at Chinese PLCs. The basic model is as follows:

$$CT_{it}=\alpha+\delta PERF_{it-1}+X\beta+\tau_t+\varepsilon_{it} \quad (1)$$

where CT_{it} denotes CEO turnover of ith PLC in the year t, $PERF_{it-1}$ is firm performance (ROA, ROE and ROS), lagged one period and adjusted by industry medians, X is a vector of control variables incorporated in regression models, τ_t is a vector of time dummies and ε_{it} is the disturbance term. α, δ, and β are unknown coefficients to be estimated.

6.4.2. Empirical results

There are a total of 6072 firm-year observations from 2001 to 2007 after the sample screening process. To investigate the top executive performance-turnover sensitivities in Chinese PLCs, three firm performance measures (ROAI, ROEI and ROSI) are adopted, and a set of control variables are included in the multinomial logistic regression models. Moreover, four dummy variables, (SOECG, SOELG, SAMBCG and SAMBLG), representing the identity of the ultimate controller, are also used to facilitate the comparison of potential behavioural differences on CEO

turnover decisions between the private controller and state controlling entities. To ensure the results are not influenced by the presence of outliers, all variables except dummy variables are winsorised at both tails of their distribution. The winsorisation is at the both 1 and 99 percentile points of the distribution.

Table 6.5 reports the estimation results of the multinomial logistic regression models of the performance-turnover sensitivities for Chinese PLCs over the sample period. In all models, the multinomial logistic regression can enable researchers to make all comparisons among seven alternatives ('Change of job', 'Contract expiration', 'Resignation', 'Dismissal', 'Personal reasons' and 'Corporate governance reform', and the control sample, i.e. no turnover). In the framework of multinomial logistics, an important assumption that should be satisfied is that outcome alternatives for the model should have the property of independence of irrelevant alternatives (IIA). Before moving on to the discussion of the estimation results, I need to test whether such a stringent assumption holds for all three multinomial logistic regression models in my study. The IIA assumption, stated simply, requires that the inclusion or exclusion of outcome alternatives does not have effects on the relative risks associated with regressors in the remaining alternatives. The Hausman test[48] is implemented here to test whether the IIA assumption is violated in the multinomial logistic regression models. Table 6.6 shows the results of the Hausman test of IIA for multinomial logistic regression models (1), (2) and (3), reported in Table 6.5, and the test statistics suggest that the

[48] The Hausman test statistic is distributed as Chi^2 and is computed as: $H=(\beta_c-\beta_e)'(V_c-V_e)^{-1}(\beta_c-\beta_e)$, where β_c is the coefficient vector from the consistent estimator, β_e is the coefficient vector from the efficient estimator, V_c is the covariance matrix of the consistent estimator and V_e is the covariance matrix of the efficient estimator.

multinomial logistic regression models in my study do not violate the IIA assumption.

Table 6.5 Estimates of multinomial logistic models

Panel A: estimates of multinomial logistic models relating to the probability of CEO turnovers to firm performance, ownership structure, board structure, CEO personal characteristics and firm characteristics.

	1.Change of job			*2.Resignation*			*3.Personal reasons*		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-3.1354***	-0.4035	-0.3593**	-4.7911***	-1.1514***	-0.5767***	-4.0376**	-0.7550	-0.4326
	(-2.90)	(-1.30)	(-2.05)	(-4.26)	(-3.92)	(-3.26)	(-2.21)	(-1.62)	(-1.44)
$SIZE_{it}$	-0.0656	-0.0946*	-0.0887*	-0.2754***	-0.3104***	-0.3254***	-0.1152	-0.1516	-0.1643
	(-1.27)	(-1.87)	(-1.75)	(-3.99)	(-4.59)	(-4.80)	(-0.85)	(-1.16)	(-1.25)
LEV_{it}	0.5858**	0.7383***	0.6969***	0.6674**	0.8197***	0.9223***	2.3017***	2.4384***	2.5470***
	(2.44)	(3.17)	(2.99)	(2.22)	(2.76)	(3.13)	(3.55)	(3.93)	(4.08)
AGE_{it}	-0.0104	-0.0099	-0.0099	0.0025	0.0031	0.0030	0.0715***	0.0723***	0.0729***
	(-1.44)	(-1.38)	(-1.37)	(0.27)	(0.34)	(0.32)	(4.00)	(4.04)	(4.08)
$TENURE_{it}$	-0.2393***	-0.2418***	-0.2411***	-0.3458***	-0.3532***	-0.3493***	-0.3474***	-0.3508***	-0.3515***
	(-9.72)	(-9.84)	(-9.81)	(-9.57)	(-9.78)	(-9.68)	(-4.81)	(-4.90)	(-4.86)
$BOARDSIZE_{it}$	-0.0012	0.0006	0.0013	0.0060	0.0094	0.0097	0.0802	0.0835	0.0845*
	(-0.06)	(0.03)	(0.07)	(0.23)	(0.36)	(0.37)	(1.57)	(1.64)	(1.66)
$INDEPENDENT_{it}$	0.6518	0.5998	0.6138	0.0393	-0.0517	-0.0283	0.8465	0.6666	0.7721
	(1.08)	(1.00)	(1.02)	(0.05)	(-0.07)	(-0.04)	(0.51)	(0.40)	(0.47)
$TOPONE_{it}$	0.9431	0.6414	0.7166	1.8652	1.3750	1.5164	11.9457**	11.3633**	11.3158**
	(0.59)	(0.40)	(0.45)	(0.87)	(0.64)	(0.71)	(2.48)	(2.37)	(2.36)
$TOPONE2_{it}$	-0.6770	-0.3953	-0.4514	-2.5423	-2.1242	-2.1961	-9.8300*	-9.1960*	-9.1670*
	(-0.41)	(-0.24)	(-0.27)	(-1.10)	(-0.92)	(-0.96)	(-1.95)	(-1.83)	(-1.82)
$TOP4\_1_{it}$	0.0784	0.0607	0.0649	0.2160	0.1892	0.1982	1.0585***	1.0368***	1.0294***
	(0.63)	(0.49)	(0.52)	(1.36)	(1.19)	(1.25)	(3.15)	(3.08)	(3.07)
$COMPENSATION_{it}$	-61.2257	-70.4892	-69.8488	-59.6808	-69.6924	-72.6427	75.5562	65.0686	64.5830
	(-1.19)	(-1.37)	(-1.36)	(-0.85)	(-1.00)	(-1.04)	(1.36)	(1.18)	(1.17)
$DUALITY_{it}$	-0.7743***	-0.7695***	-0.7662***	-0.2139	-0.1980	-0.1977	0.0348	0.0483	0.0297
	(-4.12)	(-4.10)	(-4.08)	(-1.10)	(-1.02)	(-1.02)	(0.10)	(0.14)	(0.08)

$PERF_{it-1}$ * $SOELG_{it}$	0.1431	-0.3020	-0.2562	0.6525	0.0796	-0.1315	1.6121	-0.0349	-0.3005
	(0.11)	(-0.79)	(-1.24)	(0.46)	(0.22)	(-0.64)	(0.52)	(-0.05)	(-0.85)
$PERF_{it-1}$ * $SOECG_{it}$	3.9757*	0.9801	0.5937	1.0955	2.1387**	-0.1322	1.1830	3.2984**	0.8787
	(1.73)	(1.32)	(0.98)	(0.53)	(2.36)	(-0.30)	(0.27)	(2.29)	(0.42)
$PERF_{it-1}$ * $SAMBLG_{it}$	1.1591	-0.0239	0.0662	1.1055	0.0360	0.2273	-0.7124	-0.2797	-0.0022
	(0.80)	(-0.06)	(0.30)	(0.71)	(0.09)	(0.84)	(-0.28)	(-0.37)	(-0.00)
$PERF_{it-1}$ * $SAMBCG_{it}$	-2.7748	-0.7829	-1.2757	-1.0705	0.6804	-0.3749	14.0783	1.8638	2.1515
	(-1.14)	(-1.29)	(-1.42)	(-0.35)	(0.81)	(-0.30)	(0.71)	(0.49)	(0.32)
$SOELG_{it}$	-0.0503	-0.0602	-0.0533	-0.1563	-0.1566	-0.1391	-0.6676*	-0.7212**	-0.7247**
	(-0.39)	(-0.47)	(-0.42)	(-0.94)	(-0.96)	(-0.86)	(-1.95)	(-2.13)	(-2.17)
$SOECG_{it}$	-0.1036	-0.1006	-0.0971	-0.2302	-0.1450	-0.2246	-1.0500**	-1.1283**	-0.9973**
	(-0.64)	(-0.62)	(-0.60)	(-1.03)	(-0.67)	(-1.01)	(-2.12)	(-2.23)	(-2.07)
$SAMBLG_{it}$	-0.2783**	-0.2807**	-0.2743**	-0.3872**	-0.3877**	-0.3423**	-1.2608***	-1.2409***	-1.1942***
	(-2.27)	(-2.32)	(-2.26)	(-2.33)	(-2.38)	(-2.12)	(-3.86)	(-3.87)	(-3.80)
$SAMBCG_{it}$	-0.0857	-0.0777	-0.0575	-0.0837	0.0239	0.0019	-2.8813***	-2.7995***	-2.7897***
	(-0.45)	(-0.41)	(-0.30)	(-0.30)	(0.09)	(0.01)	(-2.60)	(-2.69)	(-2.68)
Cons	-0.0144	0.5841	0.4465	3.7703**	4.5188***	4.7468***	-8.7222***	-7.8982***	-7.7416**
	(-0.01)	(0.51)	(0.39)	(2.44)	(2.97)	(3.10)	(-2.77)	(-2.58)	(-2.52)
	4.Dismissal			***5.Contract expiration***			***6.Corporate governance reform***		
	(1)	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-5.5026**	-0.5622	-0.7345**	-5.6302***	-1.2170***	-0.7125***	8.5420	1.2433	-0.0646
	(-2.10)	(-0.68)	(-1.97)	(-4.46)	(-3.69)	(-3.50)	(1.39)	(0.58)	(-0.08)
$SIZE_{it}$	-0.3295*	-0.4742***	-0.3861**	-0.0731	-0.0872	-0.1106	0.1450	0.1928	0.1792
	(-1.85)	(-2.78)	(-2.20)	(-1.01)	(-1.23)	(-1.57)	(0.73)	(0.99)	(0.92)
LEV_{it}	0.5104	1.1428	0.7710	-0.0689	-0.0136	0.1461	-0.5775	-1.0597	-0.8346
	(0.69)	(1.56)	(1.05)	(-0.21)	(-0.04)	(0.45)	(-0.63)	(-1.21)	(-0.92)
AGE_{it}	0.0121	0.0148	0.0148	0.0314***	0.0318***	0.0316***	0.0058	0.0026	0.0011
	(0.55)	(0.66)	(0.67)	(3.33)	(3.38)	(3.37)	(0.25)	(0.11)	(0.05)
$TENURE_{it}$	-0.4595***	-0.4728***	-0.4611***	-0.0689**	-0.0730**	-0.0707**	-0.2716***	-0.2693***	-0.2659***
	(-4.59)	(-4.73)	(-4.60)	(-2.33)	(-2.47)	(-2.40)	(-2.97)	(-2.97)	(-2.91)

$BOARDSIZE_{it}$	-0.0826	-0.0788	-0.0776	-0.0587**	-0.0559*	-0.0565*	-0.2214***	-0.2221***	-0.2202***
	(-1.19)	(-1.15)	(-1.12)	(-2.02)	(-1.93)	(-1.95)	(-2.84)	(-2.85)	(-2.82)
$INDEPENDENT_{it}$	5.6344***	5.4140***	5.6041***	2.0211**	1.9625**	1.9699**	-0.0434	0.1732	0.1557
	(3.17)	(3.02)	(3.13)	(2.39)	(2.32)	(2.33)	(-0.02)	(0.09)	(0.08)
$TOPONE_{it}$	6.5976	4.8797	6.2395	1.0113	0.7230	0.6581	-8.3189	-8.3714	-8.6154*
	(1.11)	(0.83)	(1.05)	(0.46)	(0.33)	(0.30)	(-1.58)	(-1.61)	(-1.66)
$TOPONE2_{it}$	-5.6198	-3.6805	-5.1999	0.2009	0.4857	0.5945	6.1585	6.3661	6.5927
	(-0.94)	(-0.62)	(-0.87)	(0.09)	(0.22)	(0.26)	(1.10)	(1.15)	(1.19)
$TOP4\_1_{it}$	0.1938	0.1404	0.1841	0.3250*	0.3185*	0.3126*	-0.4238	-0.3967	-0.4368
	(0.43)	(0.31)	(0.40)	(1.88)	(1.85)	(1.81)	(-1.03)	(-0.98)	(-1.07)
$COMPENSATION_{it}$	90.8886	76.6891	80.0923	23.8654	11.9726	10.1999	80.6099	95.3692	106.2981
	(0.94)	(0.79)	(0.83)	(0.54)	(0.27)	(0.23)	(0.81)	(0.95)	(1.07)
$DUALITY_{it}$	-0.1887	-0.1375	-0.2827	-0.1277	-0.1272	-0.1127	-1.7956*	-1.8143*	-1.8865*
	(-0.41)	(-0.31)	(-0.60)	(-0.64)	(-0.63)	(-0.56)	(-1.76)	(-1.78)	(-1.84)
$PERF_{it-1} * SOELG_{it}$	0.5851	-0.5321	-0.1375	2.4286	0.4023	0.1093	-8.0374	-1.0523	-0.0420
	(0.20)	(-0.63)	(-0.37)	(1.26)	(0.78)	(0.35)	(-1.28)	(-0.43)	(-0.04)
$PERF_{it-1} * SOECG_{it}$	3.4783	0.7309	1.3900	2.2971	0.1183	0.1816	10.1738	3.2323*	4.0237
	(0.60)	(0.33)	(0.59)	(0.90)	(0.15)	(0.31)	(1.03)	(1.65)	(1.55)
$PERF_{it-1} * SAMBLG_{it}$	-2.4709	-0.0769	-0.3746*	2.0446	-0.0331	0.2557	-6.8400	-1.4139	1.2167
	(-0.96)	(-0.08)	(-1.68)	(1.18)	(-0.08)	(0.86)	(-1.00)	(-0.58)	(0.59)
$PERF_{it-1} * SAMBCG_{it}$	6.3180	0.4327	0.7998	13.2907**	2.4754*	3.1894*	-8.3808	-1.0090	-0.0815
	(0.35)	(0.12)	(0.13)	(2.53)	(1.76)	(1.77)	(-0.00)	(-0.00)	(-0.00)
$SOELG_{it}$	0.3682	0.3172	0.3772	-0.3223*	-0.3496*	-0.3303*	-0.3966	-0.4859	-0.4613
	(0.81)	(0.71)	(0.84)	(-1.79)	(-1.95)	(-1.85)	(-0.89)	(-1.10)	(-1.05)
$SOECG_{it}$	0.3900	0.3805	0.4184	-0.4418*	-0.4800**	-0.4430*	-0.2426	-0.0967	-0.1211
	(0.69)	(0.70)	(0.76)	(-1.90)	(-2.06)	(-1.91)	(-0.39)	(-0.17)	(-0.21)
$SAMBLG_{it}$	0.2205	0.4255	0.2967	-0.3964**	-0.4285**	-0.3831**	-0.3726	-0.4622	-0.4436
	(0.51)	(1.04)	(0.71)	(-2.35)	(-2.56)	(-2.31)	(-0.82)	(-1.03)	(-0.99)
$SAMBCG_{it}$	-0.8107	-0.7895	-0.7974	-0.6218*	-0.5255*	-0.5464*	-13.7169	-14.1831	-13.2956
	(-0.75)	(-0.73)	(-0.74)	(-1.93)	(-1.75)	(-1.78)	(-0.02)	(-0.02)	(-0.02)
Cons	-0.1973	2.8017	0.7957	-2.7628*	-2.4454	-2.0091	-2.5991	-3.2600	-2.9698

	(-0.05)	(0.73)	(0.20)	(-1.71)	(-1.54)	(-1.26)	(-0.58)	(-0.75)	(-0.69)
Obs	6072			6072			6072		
Pseudo – R^2	0.0756			0.0737			0.0734		
Panel B: marginal effects									
	1.Change of job			***2.Resignation***			***3.Personal reasons***		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-0.247**	-0.026	-0.027	-0.193***	-0.049***	-0.023***	-0.026	-0.005	-0.003
	(-2.04)	(-0.79)	(-1.62)	(-3.44)	(-3.59)	(-2.84)	(-1.61)	(-1.24)	(-1.05)
$SIZE_{it}$	-0.004	-0.007	-0.006	-0.012***	-0.014***	-0.015***	-0.001	-0.001	-0.001
	(-0.82)	(-1.28)	(-1.17)	(-3.83)	(-4.36)	(-4.57)	(-0.65)	(-0.90)	(-0.98)
LEV_{it}	0.053**	0.067***	0.061***	0.028*	0.034**	0.039***	0.018***	0.019***	0.020***
	(2.24)	(2.80)	(2.63)	(1.95)	(2.37)	(2.77)	(3.31)	(3.57)	(3.76)
AGE_{it}	-0.001*	-0.001*	-0.001*	0.000	0.000	0.000	0.001***	0.001***	0.001***
	(-1.85)	(-1.79)	(-1.79)	(0.13)	(0.19)	(0.18)	(3.65)	(3.62)	(3.78)
$TENURE_{it}$	-0.021***	-0.021***	-0.021***	-0.015***	-0.015***	-0.015***	-0.002***	-0.002***	-0.003***
	(-5.05)	(-4.39)	(-5.74)	(-5.93)	(-5.27)	(-6.65)	(-3.69)	(-3.53)	(-3.90)
$BOARDSIZE_{it}$	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001*	0.001*
	(0.08)	(0.12)	(0.17)	(0.31)	(0.38)	(0.44)	(1.61)	(1.65)	(1.70)
$INDEPENDENT_{it}$	0.049	0.044	0.045	-0.009	-0.013	-0.012	0.005	0.004	0.005
	(0.82)	(0.75)	(0.76)	(-0.25)	(-0.35)	(-0.33)	(0.38)	(0.28)	(0.34)
$TOPONE_{it}$	0.064	0.040	0.046	0.075	0.054	0.061	0.097**	0.093**	0.093**
	(0.37)	(0.22)	(0.27)	(0.71)	(0.51)	(0.58)	(2.42)	(2.32)	(2.32)
$TOPONE2_{it}$	-0.043	-0.021	-0.026	-0.113	-0.096	-0.100	-0.080*	-0.075*	-0.075*
	(-0.25)	(-0.12)	(-0.15)	(-1.03)	(-0.87)	(-0.91)	(-1.90)	(-1.80)	(-1.80)
$TOP4\_1_{it}$	0.004	0.002	0.002	0.008	0.007	0.008	0.008***	0.008***	0.008***
	(0.28)	(0.16)	(0.19)	(1.13)	(0.97)	(1.03)	(2.98)	(2.92)	(2.93)
$COMPENSATION_{it}$	-6.091	-6.882	-6.786	-2.621	-3.006	-3.174	0.693	0.625	0.628
	(-1.19)	(-1.34)	(-1.32)	(-0.79)	(-0.90)	(-0.95)	(1.44)	(1.29)	(1.31)
$DUALITY_{it}$	-0.060***	-0.059***	-0.059***	-0.006	-0.005	-0.005	0.001	0.001	0.001
	(-4.07)	(-3.66)	(-4.28)	(-0.67)	(-0.57)	(-0.60)	(0.32)	(0.35)	(0.31)

$PERF_{it-1}$ * $SOELG_{it}$	-0.005	-0.033	-0.025	0.023	0.005	-0.005	0.012	-0.000	-0.002
	(-0.03)	(-0.83)	(-1.29)	(0.34)	(0.27)	(-0.56)	(0.46)	(-0.03)	(-0.79)
$PERF_{it-1}$ * $SOECG_{it}$	0.374	0.081	0.057	0.021	0.094**	-0.011	0.004	0.025*	0.007
	(1.48)	(0.98)	(0.84)	(0.21)	(1.96)	(-0.48)	(0.12)	(1.95)	(0.38)
$PERF_{it-1}$ * $SAMBLG_{it}$	0.101	-0.002	0.004	0.042	0.002	0.010	-0.008	-0.002	-0.000
	(0.67)	(-0.04)	(0.16)	(0.55)	(0.12)	(0.73)	(-0.39)	(-0.36)	(-0.08)
$PERF_{it-1}$ * $SAMBCG_{it}$	-0.369	-0.099	-0.148	-0.078	0.029	-0.021	0.114	0.015	0.018
	(-0.16)	(-0.10)	(-0.20)	(-0.08)	(0.07)	(-0.06)	(0.49)	(0.18)	(0.32)
$SOELG_{it}$	-0.002	-0.003	-0.002	-0.006	-0.006	-0.005	-0.005**	-0.005**	-0.005**
	(-0.15)	(-0.20)	(-0.17)	(-0.79)	(-0.77)	(-0.70)	(-2.00)	(-2.13)	(-2.24)
$SOECG_{it}$	-0.006	-0.006	-0.006	-0.009	-0.005	-0.008	-0.006***	-0.006***	-0.006***
	(-0.40)	(-0.40)	(-0.37)	(-0.92)	(-0.51)	(-0.91)	(-2.72)	(-2.91)	(-2.65)
$SAMBLG_{it}$	-0.022*	-0.022*	-0.022*	-0.015**	-0.015*	-0.013*	-0.009***	-0.008***	-0.008***
	(-1.81)	(-1.76)	(-1.84)	(-1.99)	(-1.95)	(-1.78)	(-3.61)	(-3.48)	(-3.61)
$SAMBCG_{it}$	-0.003	-0.003	-0.001	-0.001	0.004	0.003	-0.009***	-0.009***	-0.009***
	(-0.17)	(-0.18)	(-0.06)	(-0.10)	(0.28)	(0.19)	(-5.87)	(-5.87)	(-5.84)
	4.Dismissal			***5.Contract expiration***			***6.Corporate governance reform***		
	(1)	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-0.025*	-0.002	-0.003	-0.252***	-0.056***	-0.032***	0.015	0.002	0.000
	(-1.68)	(-0.47)	(-1.62)	(-3.85)	(-3.43)	(-3.16)	(0.02)	(0.02)	(0.03)
$SIZE_{it}$	-0.002*	-0.002**	-0.002**	-0.002	-0.003	-0.004	0.000	0.000	0.000
	(-1.70)	(-2.54)	(-2.01)	(-0.66)	(-0.77)	(-1.12)	(0.02)	(0.02)	(0.03)
LEV_{it}	0.002	0.006	0.003	-0.010	-0.009	-0.001	-0.001	-0.002	-0.002
	(0.53)	(1.35)	(0.84)	(-0.58)	(-0.49)	(-0.04)	(-0.02)	(-0.02)	(-0.03)
AGE_{it}	0.000	0.000	0.000	0.002***	0.002***	0.002***	0.000	0.000	-0.000
	(0.49)	(0.60)	(0.61)	(3.30)	(3.30)	(3.39)	(0.02)	(0.02)	(-0.01)
$TENURE_{it}$	-0.002***	-0.002***	-0.002***	-0.001	-0.001	-0.001	-0.000	-0.000	-0.000
	(-4.02)	(-3.94)	(-4.17)	(-0.46)	(-0.51)	(-0.51)	(-0.02)	(-0.02)	(-0.03)
$BOARDSIZE_{it}$	-0.000	-0.000	-0.000	-0.003	-0.003	-0.003*	-0.000	-0.000	-0.000
	(-1.10)	(-1.04)	(-1.05)	(-1.63)	(-1.44)	(-1.69)	(-0.02)	(-0.02)	(-0.03)

$INDEPENDENT_{it}$	0.029***	0.029***	0.030***	0.097**	0.095**	0.095**	-0.000	-0.000	-0.000
	(2.84)	(2.71)	(2.84)	(2.26)	(2.17)	(2.20)	(-0.02)	(-0.01)	(-0.02)
$TOPONE_{it}$	0.034	0.026	0.032	0.034	0.023	0.019	-0.014	-0.014	-0.015
	(1.06)	(0.79)	(1.01)	(0.29)	(0.20)	(0.16)	(-0.02)	(-0.02)	(-0.03)
$TOPONE2_{it}$	-0.029	-0.019	-0.027	0.027	0.038	0.044	0.010	0.011	0.012
	(-0.90)	(-0.59)	(-0.84)	(0.23)	(0.31)	(0.38)	(0.02)	(0.02)	(0.03)
$TOP4\_1_{it}$	0.001	0.001	0.001	0.015*	0.015*	0.015*	-0.001	-0.001	-0.001
	(0.33)	(0.22)	(0.31)	(1.72)	(1.71)	(1.66)	(-0.02)	(-0.02)	(-0.03)
$COMPENSATION_{it}$	0.534	0.484	0.492	1.684	1.171	1.089	0.140	0.171	0.200
	(1.00)	(0.88)	(0.93)	(0.74)	(0.51)	(0.48)	(0.02)	(0.02)	(0.03)
$DUALITY_{it}$	-0.001	-0.000	-0.001	-0.002	-0.002	-0.001	-0.002	-0.002	-0.002
	(-0.23)	(-0.12)	(-0.13)	(-0.21)	(-0.20)	(-0.14)	(-0.02)	(-0.02)	(-0.03)
$PERF_{it-1} * SOELG_{it}$	0.002	-0.003	-0.001	0.121	0.022	0.008	-0.013	-0.002	-0.000
	(0.14)	(-0.61)	(-0.29)	(1.22)	(0.87)	(0.50)	(-0.02)	(-0.02)	(-0.01)
$PERF_{it-1} * SOECG_{it}$	0.015	0.003	0.007	0.088	-0.008	0.005	0.015	0.005	0.007
	(0.48)	(0.21)	(0.55)	(0.65)	(-0.18)	(0.15)	(0.02)	(0.02)	(0.03)
$PERF_{it-1} * SAMBLG_{it}$	-0.015	-0.000	-0.002*	0.096	-0.001	0.012	-0.011	-0.002	0.002
	(-1.03)	(-0.07)	(-1.75)	(1.07)	(-0.06)	(0.77)	(-0.02)	(-0.02)	(0.03)
$PERF_{it-1} * SAMBCG_{it}$	0.032	0.002	0.004	0.690	0.129	0.172*	-0.014	-0.002	-0.000
	(0.21)	(0.04)	(0.09)	(0.62)	(0.27)	(1.86)	(-0.00)	(-0.00)	(-0.00)
$SOELG_{it}$	0.002	0.002	0.002	-0.015*	-0.016*	-0.015*	-0.001	-0.001	-0.001
	(0.80)	(0.74)	(0.84)	(-1.74)	(-1.84)	(-1.82)	(-0.02)	(-0.02)	(-0.03)
$SOECG_{it}$	0.003	0.003	0.003	-0.018**	-0.020**	-0.019**	-0.000	-0.000	-0.000
	(0.66)	(0.66)	(0.71)	(-2.04)	(-2.27)	(-2.08)	(-0.02)	(-0.02)	(-0.03)
$SAMBLG_{it}$	0.002	0.003	0.002	-0.016**	-0.018**	-0.016**	-0.000	-0.001	-0.001
	(0.66)	(1.12)	(0.84)	(-2.02)	(-2.16)	(-2.00)	(-0.02)	(-0.02)	(-0.03)
$SAMBCG_{it}$	-0.003	-0.003	-0.003	-0.024**	-0.021**	-0.022**	-0.004*	-0.004	-0.004***
	(-0.99)	(-0.97)	(-0.98)	(-2.35)	(-2.06)	(-2.12)	(-1.66)	(-0.12)	(-3.85)

Notes: (1) The multinomial logistic model can be thought of as simultaneously estimating binary logistics for comparisons among all alternatives; (2) Time, regional and industrial effects are controlled in all columns; (3) Z-statistics are reported in brackets; (4) * P-value≤10%, ** P-value≤5%, and *** P-value≤1%.

Table 6.6 Hausman test of independence of irrelevant alternatives (IIA)

Test group(alternative)	(1)	(2)	(3)
1. Change of job	0.65	1.02	0.42
2. Resignation	0.63	1.26	0.59
3. Personal reasons	0.95	0.64	0.82
4. Dismissal	0.25	0.22	0.60
5. Contract expiration	1.21	0.58	2.22
6. Corporate governance reform	1.03	0.23	1.85

Notes: * P-value≤10%, ** P-value≤5%, and *** P-value≤1%.

It is difficult to interpret coefficient estimates from multinomial logistic models, as the change in the probability includes coefficient estimates from all alternatives. It is likely that a positive coefficient may not actually imply an increased probability of a particular alternative. Hence, in addition to reporting the multinomial logistic coefficients and the levels of significance, the marginal effects of a change in the independent variables, which is evaluated at the sample mean, are also reported in panel B of Table 6.5. For any dummy variable, the marginal effects show by how much the probability of CEO turnover will change with a change in status, while for any continuous independent variable, they show how much the probability of CEO turnover will change with a one unit change in the value of that variable. With the marginal effects, it could therefore be much easier to determine the relative importance of each independent variable in predicting the likelihood of CEO turnover.

In Table 6.5, ROAI, ROEI and ROSI lagged one period are used as firm

performance in models (1), (2) and (3), respectively. Table 6.5 shows that whatever firm performance measure is used, similar results are found across models. Interestingly, despite many aspects that the six different alternatives are found to have in common, the estimates indicate that differences do exist across them. It can be argued that identifying those similarities and differences among different turnover types would lead to a better understanding of CEO turnovers in the Chinese PLCs. According to Model (2), a one-standard-deviation increase in ROE yields a decline in the likelihood of CEO turnover by approximately 1.12%, if the turnover type is 'Contract expiration'. Based on the results of Model (3) ('Resignation'), a 0.1 increase in ROS is associated with a 0.23% decrease in the probability of the CEO being replaced. An increase of one standard deviation (0.3105) would decrease the likelihood of CEO turnover by almost 1% in Model (3) and the stated reason is 'Contract expiration'. Although the coefficients are statistically significant, it is not economically important. Given that the sample is mainly driven by state-owned PLCs, it is no surprise to find that in a PLC, a CEO's performance is something but not everything in determining whether he/she should leave or not.

In accordance with the existing literature, there is a negative relationship between CEO turnover and firm performance for Chinese PLCs. Table 6.5 shows quite clearly that poor firm performance (ROA, ROE and ROS) is significantly related to CEO turnover, and this applies to all turnover types except the 'Corporate governance reform'. The 'Corporate governance reform' refers to two unique types of turnovers at Chinese PLCs as a result of corporate governance reform promoted by the CSRC in 1998, and it is unlikely to be caused by poor firm performance. It

is worth noting that the results might suggest that the face-saving devices for departing CEOs are widely used in Chinese PLCs. It is possible that 'Change of job', 'Resignation', 'Personal reasons' and 'Contract expiration' can all be used as face-saving devices, since the relationship between firm performance and CEO turnover is found to be significantly negative for these turnover types. As seen in Table 6.1, during the sample period, only 57 out of a total of 1835 CEO turnovers are clearly reported as 'Dismissal'. Defond and Park (1999) argue that firms rarely use poor firm performance as publicly disclosed explanations for CEO turnovers. Gregory-Smith *et al* (2009) suggest that in many cases of CEO turnovers, it could be suspected that face-saving explanations are used in order to save the ousted CEOs' future careers and reputations. For example, 'Health problems' is one of the most frequently used face-saving devices for departing CEOs who would otherwise be punished or dismissed due to unsatisfactory firm performance. To avoid such awkward situations, they may choose to resign from their managerial positions, citing health problems as a generally acceptable reason for their leaving.

Table 6.5 shows that firm size is negatively related to the occurrence of the replacement of CEOs, but it does not apply to 'Corporate governance reform', 'Personal reasons' and 'Contract expiration'. This negative relationship indicates that larger firms are more likely to retain the services of incumbent CEOs, which is consistent with Berry *et al*'s (2000) argument that it is less likely for executives in larger firms to be considered as unsatisfactory. Firth *et al* (2006a) provide an alternative explanation for this negative relationship by arguing that CEO positions in those larger firms always require more skilled persons and it could be very difficult to find capable successors to replace the incumbents. Thus, it could be

much easier for CEOs to get themselves entrenched in larger firms.

An interesting finding manifested in the results is that the capital structure (leverage ratio) of Chinese PLCs may increase the likelihood of turnover. The positive and significant relationship between a PLC's leverage ratio and turnover supports Jensen's (1986) argument that external borrowings can play an important role in disciplining and motivating the management. In this sense, firms with more debts tend to have more frequent CEO turnovers. Such a positive connection can be more clearly observed for turnover types 'Change of job', 'Resignation' and 'Personal reasons'. For instance, the marginal effects reported in Panel B of Table 6.5 show that if a PLC's leverage ratio increases by 0.1, it will have decreased probability of CEO turnover by 0.67 per cent.

In this study a CEO's tenure is measured by the number of years the CEO has held the position. Under the entrenchment hypothesis[49] supported by many previous studies, it could be expected that CEOs with longer tenures are less likely to be ousted. My findings would lend support to such a hypothesis, as the estimated coefficients of $\mathbf{TENURE}_{it}$ are negative and statistically significant at least at the 1% level in all three models, whatever the turnover type is. Prior studies suggest that CEOs with longer tenure tend to be more powerful and face lower risk of turnover than CEOs with shorter tenures (see, for example, Salancik and Meindl, 1984; Allgood and Farrell, 2000; Goyal and Park, 2002; Shen and Cannella, 2002). Gregory-Smith *et al* (2009) argue that longer tenure provides a CEO with more

[49] Longer tenure can provide CEOs with opportunities to establish a power base over time, which would probably lower the risk of them being removed.

time to capture the board of directors, and thus makes the board act in his or her favour. Results shown in Table 6.5 are consistent with the existing literature. Moreover, it appears that CEOs with longer tenure in China could act as an obstacle to the CSRC's recommendation of improving corporate governance in Chinese PLCs by separating the chairman of the board and CEO roles, as a negative link between the CEO tenure and turnover is found for the turnover group 'Corporate governance reform'. The marginal effects of $\mathbf{TENURE}_{it}$ are significant. According to Model (1), one more year (e.g. from 3.5 to 4.5) in $\mathbf{TENURE}_{it}$ results in a 2.1 per cent decrease in CEO turnover if the stated reason for turnover is 'Change of job'.

It is worth noting that the relationship between turnover and CEO age is found to be positive and significant. Table 6.5 shows that such a positive relationship mainly applies to two turnover types, 'Personal reasons' and 'Contract expiration', indicating that the age of a CEO is a factor but not an important driving force in CEO turnovers in Chinese PLCs. For example, for those turnovers for which the stated reason is 'Personal reasons', the results show that an increase in CEO age of one year will increase the probability by 0.1% (Model (1)). My findings suggest that health problems could significantly shorten a CEO's tenure in China, under the logic that older people are more likely to have health problems. In other words, older CEOs are more likely to resign from their managerial positions due to health problems. Also, it might be concluded that Chinese PLCs may prefer not to renew job contracts with older CEOs. In contrast, younger CEOs would stand a better chance of being offered new employment contracts/contract renewals in the managerial labour market in China.

Jensen (1993) and Fama and Jensen (1983a) point out that concentrating decision management and decision control in one individual would probably result in the failure of internal control systems, as it can significantly weaken the board's effectiveness in monitoring the top management. Not surprisingly, those CEOs in Chinese PLCs who also hold the position of the chairman of the board face significantly less risk of turnover, as estimated coefficients of $\mathbf{DUALITY}_{it}$ are found to be negative and significant in all models. Such a negative relationship is more pronounced for the 'Change of job' and the 'Corporate governance reform'. For example, if the turnover reason is 'Change of job', according to Model (1) such a dual role of CEO would result in a 6 per cent decrease in the likelihood of turnover. This finding is in line with the existing literature on top executive turnover, which suggests that top executives holding both the CEO and chairman of the board positions would have more power to shelter themselves from normal monitoring and disciplining efforts of shareholders, thus facing a lower risk of turnover (see, for example, Dahya *et al.*, 2002). Moreover, the results also call for a much stricter implementation of the CSRC's recommendation of separating the dual role of the chairman and the CEO. For example, the CSRC could make this recommendation a compulsory policy for all PLCs in China.

Previous studies suggest that the top executive compensation scheme can effectively reduce agency problems by helping align the interests of the top executive with those of shareholders. An increase in CEO compensation would therefore probably decrease the likelihood of CEO turnover. However, my findings do not provide evidence for such a relationship at Chinese PLCs. One possible explanation could be that the compensation scheme is currently not popular in

China, and it might be expected that compensation for top executives may show little effect on CEO turnover in the Chinese PLCs.

According to the existing literature, there are conflicting views towards the effects of the size of the board on CEO turnover. Jensen (1993) and Yermack (1996) argue that it could be much easier for entrenched top executives to capture larger boards. However, Fan *et al* (2007) also point out the possibility that if boards are smaller, then CEOs are more likely to form closer relationships with other board directors, thus making the boards act in their favour. In such cases, under-performing CEOs may face significantly lower risk of replacement (Helmich, 1980). The results reported in Table 6.5 provide supporting evidence for Jensen (1993) and Yermack (1996), and the estimated coefficients of $\mathbf{BOARDSIZE}_{it}$ are found to be significantly negative, particularly for turnover types 'Contract expiration' and 'Corporate governance reform'.

Another major issue of board structure is the level of independence of the board, measured by the ratio of independent directors sitting on the board. The existing literature stresses the role that independent directors can play in enhancing the monitoring efforts of the board. The independent directors are believed to have both expertise and incentives to spot and oust under-performing CEOs. According to the above reasoning, I would expect a positive and significant link between $\mathbf{INDEPENDENT}_{it}$ and the likelihood of CEO turnover in my study. Table 6.5 shows that the estimated coefficients of $\mathbf{INDEPENDENT}_{it}$ are positive and statistically significant, which indicates that independent directors in China do

enhance PLCs' internal governance mechanisms by more effectively monitoring their CEOs' behaviour. However, it should also be noted that such a positive role of independent directors in Chinese PLCs might be limited, and independent directors are more active in disciplining CEOs in cases of 'Dismissal' and 'Contract expiration'.

As to the influence that ownership structure may exert on CEO turnovers, the results in Table 6.5 document that the ownership concentration of Chinese PLCs has little effect on the likelihood of CEO turnover. Yet, as expected, the identity of the ultimate controller is found to have certain effects on the turnover. The results reported in Table 6.5 reveal several interesting points. Firstly, Chinese PLCs are found to have similar sensitivities of CEO turnover to performance, regardless of the identity of their ultimate controllers. In order to test whether different ultimate controllers have different sensitivities of CEO turnover to performance, four interaction terms of firm performance with the dummies for four state controlling entities are included in all regression models. However, no systematic results in this respect are detected, and the interactions are found to be statistically insignificant in all three models. Secondly, overall, state-controlled PLCs tend to have fewer CEO turnovers than privately controlled PLCs. After splitting CEO turnovers into six groups according to their publicly disclosed reasons, I find that compared with their private counterparts, all state controlling entities are more likely to retain services of their incumbent CEOs, particularly if the turnover types are 'Personal reasons' and 'Contract expiration'. For example, in Model (1), the marginal effects of 'Personal reasons' for SOELG, SOECG, SAMBLG and SAMBCG are -0.005, -0.006, -0.009 and -0.009, which indicates that in PLCs the probability of CEO

turnover will decrease by 0.5%, 0.6%, 0.9% and 0.9%, respectively, if these state agents are the ultimate controllers.

The results reported in Table 6.5 regarding the relationship between ownership and CEO turnover can have several implications. On one hand, the results provide evidence to support my prior reasoning that the non-profit objectives and policy burdens imposed on the state-controlled PLCs may inhibit PLCs from dismissing their CEOs. It is worth noting that CEOs serving in those state-controlled PLCs may use the policy burdens as an excuse to avoid possible replacements. On the other hand, it appears that state-controlled PLCs are less likely to replace their CEOs due to non-performance related reasons (for example, age, health conditions). Moreover, only PLCs controlled by SAMBLGs are found to have fewer CEO turnovers than their private competitors in 'Change of job' and 'Resignation'. This may imply that compared with PLCs supervised by all other state entities, PLCs controlled by SAMBLGs tend to have more policy burdens, and are therefore more likely to keep the services of their current CEOs as long as they can successfully fulfil the given non-profit objectives. Thirdly, for turnovers for which the stated reasons are 'Dismissal' and 'Corporate governance reform', there is no difference in the probability of CEO turnover among PLCs controlled by different ultimate controllers. Since the results imply no significant difference in the CEO performance-turnover link among Chinese PLCs, I would expect to see no reduction in the probability of CEO turnover for all state-controlled PLCs in the sub-sample 'Dismissal', which is most likely to be performance-related. Similar findings for the sub-sample 'Corporate governance reform', however, are more likely to rest on the special nature of this type of turnover.

Furthermore, it is argued that ownership by non-management blockholders is important in mitigating agency problems by reducing management entrenchment and supporting a more active board (see, for example, Pagano and Roell, 1998; Bloch and Hege, 2001). My finding is consistent with the above argument, and the estimated coefficients of $\mathbf{TOP4\_1}_{it}$ are found to be positive and statistically significant in Table 6.5. The positive and significant link between the non-management blockholders and CEO turnover exists mainly for CEO turnover types 'Personal reasons' and 'Contract expiration', indicating a positive but limited role of the non-management blockholders in disciplining CEOs. Given the relatively small portion of equity ownership by the non-management blockholders, the limited influence level they do have on the likelihood of CEO turnover is considered modest.

6.4.3. Robustness check

To check whether my results are robust to alternate measures of some key variables, a series of robustness tests have been conducted and corresponding results are reported in Tables A6.2 and A6.3 in the Appendix. Since in China the average CEO compensation level is a bit low and in my sample only 1642 out of total 6072 cases have positive CEO compensation levels, I therefore re-run the regression using a dummy variable equal to one if the level of CEO ownership is positive, and zero otherwise. The estimation results are reported in Table A6.2. Interesting results arise as the dummy variable is found to be statistically significant at conventional levels, suggesting that top executive compensation does help align the interests of the top executives and those of shareholders in Chinese PLCs, which would in turn decrease the likelihood of CEO turnover.

In addition, to test if the estimation results are consistent for alternative measures of a firm's size and leverage ratio, some robustness tests are conducted and results are reported in Table A6.3. In Table A6.3, a firm's size is calculated by number of employees and the leverage ratio is measured by a firm's total liability over total assets minus total liability. The estimation results provided by Table A6.3 do not contradict my main results reported in Table 6.5.

6.5. Conclusion

This chapter investigates the CEO performance-turnover sensitivity of Chinese PLCs, and also identifies the determinants of the turnover. As predicted, a negative link between corporate performance and the likelihood of CEO turnover is found. Such a negative relationship indicates that an improvement in firm performance will decrease the probability of a CEO being replaced. Moreover, PLCs whose ultimate controllers are private investors tend to have more CEO turnovers. Arguably, privatisation can improve corporate governance quality and have a positive impact on firm performance by holding CEOs more accountable for their performance. However, my findings suggest that in China, the state-controlled PLCs may have adopted similar performance-evaluation standards for their CEOs as their private rivals, and no systematic difference in the CEO performance-turnover sensitivity is found among PLCs. Also, it is likely that PLCs may use some face-saving reasons when their incumbent CEOs are dismissed. By splitting the sample according to the stated reasons for CEO turnover, the results indicate that state-controlled PLCs are more likely to retain their incumbent CEOs only if turnovers are not performance-related. In this sense, it might be concluded that China's corporate governance is beginning to come of age.

Also, this chapter evaluates the effectiveness of a variety of corporate governance mechanisms in disciplining CEOs of Chinese PLCs. It could be argued that due to China's relatively immature capital markets and weak legal protection for investors, conventional governance mechanisms may not have the same impact on CEO turnover as they do in Western economies. My findings show that the majority of

governance mechanisms are found to have the same effects as predicted by prior studies conducted in the West, except the CEO compensation scheme. For example, firms' capital structure (leverage ratio) is found to positively affect the likelihood of turnover, the presence of independent directors can help discipline under-performing CEOs, and CEOs also holding the position of the chairman of the board are less likely to be replaced, etc. However, it is worth noting that the extent of influence that these governance mechanisms may have on the CEO turnover in Chinese PLCs is modest.

CHAPTER SEVEN
CONCLUSION

7.1. Overview

This thesis seeks to make valuable contributions to the corporate governance literature by conducting in-depth empirical analyses of three important issues regarding corporate governance in the context of China. Each issue is thoroughly discussed in its own empirical chapter. The first empirical chapter analyses the relationship between ownership structure and corporate performance of Chinese PLCs. Given the unique characteristics of Chinese markets, the heterogeneity of state entities is taken into consideration in the analysis. As a result, this chapter sets up a new research framework for corporate governance in the Chinese context, and the empirical results contrast with most previous studies by showing that state ownership does not necessarily drag down corporate performance.

The second empirical chapter provides analysis of corporate cash holdings in China. In doing so, it starts by examining the determinants of corporate cash holding behaviour of PLCs. It then moves on to provide evidence for the target level of cash holdings in China, and to document the dynamic partial adjustment behaviour of PLCs towards the target cash holding levels. Furthermore, this chapter also tests and reconciles competing theories proposed by the extant literature on corporate

cash holdings.

The third and final empirical chapter investigates the top executive turnover of Chinese PLCs. It aims to address the shortcomings in the literature, and, at the same time, particular attention is paid to the role of the ultimate controller in disciplining under-performing CEOs. Unlike most previous studies that have roughly divided all turnovers into two categories, forced and normal turnovers, I split the sample according to the stated reasons for CEO turnovers and utilise multinomial logistic regression techniques to provide a detailed examination of the top executive turnover in China. The empirical analysis of this chapter reveals several interesting findings that can truly improve our knowledge of corporate governance in this respect.

7.2. Summary of main findings

The three empirical chapters included in this thesis have provided interesting and insightful findings to further enhance our understanding of the current corporate governance practices in China. This section is intended as a summary of the main findings.

The first empirical chapter focuses on the investigation of issues of ownership structure and corporate performance in the Chinese context. The majority of previous studies in this area have suffered from two types of misclassification as they either use share type as a proxy for owner type or treat all types of state ownership as one group. They fail to properly identify and distinguish among the different types of owners (ultimate controllers) of PLCs, which renders analyses

largely invalid in previous research in this respect. Section 4.4 demonstrates how such shortcomings will lead to erroneous conclusions. Considering the heterogeneity of state agents in terms of their non-uniform incentive structures and motivations, my study differs considerably from the prior research by distinguishing different owners. The state-controlled PLCs are classified into four major types based on their owners' political and economic interests and incentives. Thus, all PLCs in the sample are divided into five types: SOELGs, SOECGs, SAMBLGs, the SAMBCG and private investors. Following this classification, with special attention paid to the types of ultimate controllers in PLCs, the empirical analysis reveals several interesting and insightful findings that could potentially inform future research. To offer robust and reliable estimation results, three different indicators of corporate performance – ROA, ROE, and ROS – are used. Firstly, state ownership as a whole is found to be inferior to private ownership, but this does not necessarily mean that state ownership always reduces shareholders' wealth. As is clearly shown by the empirical findings, PLCs whose ultimate controllers are the SAMBCG and SOECGs can perform equally as well as their private counterparts. Secondly, a number of factors that are theoretically proposed by agency theory are incorporated in the analysis, and despite the unique characteristics of the Chinese markets, many of them are found to have similar effects as in developed economies. Last but not least, an 'M-shaped' relationship between ownership concentration and corporate performance was confirmed by applying the spline regression technique- to the sample. Such a non-monotonic relationship suggests that there could be two optimal levels of ownership concentration.

The second empirical chapter provides an in-depth examination of corporate cash holdings in China. The type of ownership is included as a main element in the analysis. Empirical research reveals the determinants of corporate cash holdings in PLCs, and the majority of factors are found to have similar effects as found in Western markets. The analysis also supports the amalgamation of the well-known trade-off theory and the financing hierarchy theory/pecking order theory. Amongst all findings, it is worth noting that PLCs controlled by state owners have significantly less cash holdings than those controlled by private investors both in the short-run and in the long-run. Meanwhile, regardless of types of state ownership, all state owners are found to have similar cash holding levels. Such interesting findings can be attributed to the unique institutional background in China. On one hand, it might be evidence revealing that private owners in China may have more incentives to hold liquid assets in order to not forego possible profitable projects in the future. Dittmar *et al* (2003) suggest that firms in countries with less developed capital markets may only accumulate cash as a buffer against future cash shortfalls. A long-criticised legacy of the planned economy and even nowadays is the 'soft budget' constraint, which means that the state-controlled firms in China enjoy endless financial backing and easy negotiation of finance with the financial provider (the government). In this sense, PLCs owned by private investors could be more financially constrained, and are thus more incentivised to retain higher cash holding levels. On the other hand, private owners hold more cash assets simply because they are more likely to expropriate minority shareholders by increasing the amounts of liquid assets under their control that can be used to further their own interests. Arguably, liquid assets are easy targets of rent-seeking management and controlling shareholders. Jensen (1986) argues that agency

conflicts might become more severe when firms have large free cash flows.

The empirical analysis of this chapter also supports the idea that there are target cash holding levels for PLCs. The results are consistent with the view that market frictions may cause delays for Chinese PLCs in adjusting towards target cash holdings levels. Utilising the partial dynamic adjustment model, the empirical results demonstrate that amongst all Chinese PLCs, PLCs with private owners are found to have the fastest adjustment speeds. I put forward two possible explanations for such findings. The first explanation might be that private owners are more cautious about their cash-holding positions. As discussed above, privately-controlled PLCs may have more difficulties in accessing external finance. In order to avoid finding themselves slipping into cash shortages that could potentially increase their financial risks, they have a greater tendency to swiftly adjust their cash holdings towards the target level by all possible means. Another explanation would simply be that private owners can run their businesses more efficiently than state competitors, and thus have much quicker adjustment speeds.

The third and final empirical chapter studies the top executive (CEO) turnover of Chinese PLCs by focusing on the impact of types of ultimate owners and the exit types of departing CEOs. This chapter is intended to mainly address two issues. First, it explicitly models the executive turnover-performance relationship at Chinese PLCs. In order to examine whether the relationship may vary for different types of state ownership, the potential impact of the heterogeneity of state agents on CEO turnovers is also thoroughly explored in this study. Second, the dataset used in this study identifies a number of turnover reasons for departing CEOs.

Applying multinomial logistic regression techniques to the sample, empirical results generate several insightful findings. First, consistent with the existing literature, a negative turnover-performance relationship for Chinese PLCs is confirmed. Hence, CEOs will be ousted if their performance is deemed unsatisfactory. Second, despite the different incentives and motivations that different owners may possess, empirical analysis indicates that all owners tend to have similar turnover-performance sensitivities. It is worth noting that state owners are more reluctant to remove their CEOs as long as firms' corporate performance meets the required level. Third, analysing the sample and taking the stated reasons for CEO turnovers into account, results suggest that PLCs tend to use some 'face-saving' reasons to disguise the true reasons for turnovers. One possible explanation for the application of 'face-saving' reasons is to avoid potentially damaging the leaving CEOs' future careers. Finally, this chapter conducts an examination of a variety of factors that may affect CEO turnover, and most of them are found to have similar impacts as in developed economies.

7.3. Policy implications

In addition to contributing to the literature on corporate governance in the Chinese context, my study has some implications for public policy. China's gradual economic reform strategy has allowed the government to accumulate experience based upon lessons learnt from the recent past reforms or regional experiments. My study, hopefully, can provide some useful guides for policy makers, and have some policy implications for strategies of future economic reform.

The economic reform in China has reached the point where many easy and less controversial reform issues have already been solved, while issues that still remain are more difficult and ideologically controversial to deal with. Clarke (2003) argues that the Chinese government has to seriously consider issues of whether it is still necessary for the state to continue to maintain a full ownership interest in firms in several sectors. At the 16th National People's Congress (NPC) in 2002, in order to deepen the economic reform and inject new impetus into the economy, the Chinese government proposed to further reduce the state ownership in the whole economy. Therefore, several questions has arisen in this respect, such as what type of state ownership will be relinquished in the upcoming phase of the economic reform, and how and to what extent the government should retreat from the whole economy. Moreover, as China's reform in the economic sector deepens, many problems have emerged. The most difficult and challenging issue in the development of China's stock market arises from poor corporate governance practices. Ownership structure *per se* does not decide everything. It might be more important for the CSRC, the major regulatory body of the stock market, to improve corporate governance systems of PLCs and provide better protection for outside investors.

The results of my study provide some directions and hints on the path of further divestment of the state ownership as well as the development of China's stock market. First, my study suggests that it is not necessary for state ownership to be inferior to private ownership. Under proper management and strict monitoring, PLCs controlled by some state entities can perform as well as their private rivals. Second, if the government decides to further decrease its shares in the whole economy by relinquishing control of some state-owned PLCs, it should start with

those controlled by SAMBLGs and SOELGs. My findings show that among the four types of state controlling entities, the SAMGLG and the SOELG are the worst performers in terms of corporate performance and corporate governance. PLCs under their control have displayed rather poor operating performance and have failed to live up to investors' expectations. Third, as the economic reform deepens, it should be imperative for the Chinese government to create a fairer arena for all market players. Although PLCs controlled by different types of investors are subject to the same regulations and laws, those controlled by the state are found to have greatly benefited from some invisible or underlying rules that probably stem from China's former centrally-planned economic system. One of these rules is in connection with the so-called 'soft budget' constraint. My study has found that the state-controlled PLCs could enjoy endless financial backing from the government and easy negotiation of finance with their financial providers, which are mainly state-owned banks. In contrast, PLCs owned by private investors would be subject to more financial constraints, hence it is necessary and urgent for the Chinese government to eliminate all the invisible or underlying rules so as to construct a healthier and better functioning stock market. Last but not least, as the economic reforms deepen, the time has come for the government to get rid of state interference and relieve policy burdens on state-owned PLCs. The results of my study suggest that state-owned PLCs are more likely to retain their incumbent top management whose evaluation package contains non-profit maximisation criteria. Arguably, policy burdens imposed on state-owned PLCs may hold their top management less accountable for firm performance measures, and it would be much easier for top management to use policy burdens as the excuse for their unsatisfactory performance.

7.4. Limitations and further research

The findings of this thesis can help shape the direction of future research in corporate governance. The findings of the three empirical chapters demonstrate the need to address issues in relation to the heterogeneity amongst state ownership types in Chinese corporate governance research. Neglecting state owners' different political and economic interests would probably obscure the true story. As noted already, many previous studies have flaws in this respect as they fail to identify and distinguish different types of ownership. The first empirical chapter has remedied such flaws and demonstrated how the correct identification of ultimate owners would lead to a different story. However, this chapter did not fully address all aspects, and there is still room for further research. As suggested by the literature, the divergence between cash flow and control rights can largely help to explain the incentives of controlling shareholders to expropriate minority shareholders (see, for example, Claessens *et al.*, 2002). Incorporating factors that capture such divergence in the examination of ownership structure and corporate governance would probably provide us with a better understanding. However, due to the limitations of the data, this has to be left for further research.

The second empirical chapter has provided a clear picture of corporate governance in one particular aspect: corporate cash holdings. However, the issue of cash holdings is only part of the story of firms' capital structure. If appropriate data could be collected, further investigation could focus on issues related to PLCs' capital structure. Similarly, the third empirical chapter is also limited by the data available and could be improved with further investigations. As acknowledged

before, it is difficult but highly beneficial to obtain the data on the destinations of the leaving top executives, which can enable researchers to clearly determine whether top executives are removed or not. Research with such data would probably produce a sharper image of the turnover-performance relationship in China and bring more fruitful insights as a result. Furthermore, in China the government is both the regulator and a player in the capital markets. Arguably, a top executive with a good *guanxi* with the government can help his/her company to secure favourable regulatory conditions and access to external funds, such as bank loans, hence our knowledge of the top executive turnover could be greatly improved with data on top executives' political connections to the government. However, constrained by the dataset available, I have to confine the research to the current scope and leave such expansions for further research.

The present research has contributed greatly to the improvement of our understanding regarding corporate governance in China, although it has only partially redressed the inadequacies in the literature. There is still large scope for future research in this area. It would be useful to conduct research with respect to many other issues, such as corporate capital structure, the pay-performance relationship of top executives, the role of institutional investors and the role of *guanxi*. Moreover, my study is also subject to limitations arising from the vague image of real policy burdens imposed on state-owned PLCs. I doubt if obtaining information regarding retirement and other welfare costs, redundant workers and the persistence of price distortions can help draw a complete picture of the total policy burdens. Nevertheless, a better knowledge of these issues would greatly enhance our understanding of the relative importance of corporate governance

mechanisms in China, and could eventually lead to the emergence of a clear picture of corporate governance research.

In addition, due to the short history of the Chinese stock market, my sample is an unbalanced panel with a relatively short period. Inclusion of new PLCs and exclusion of delisted PLCs might have some influence on my results. Furthermore, due to there being relatively fewer privately-controlled PLCs in my data, it seems more difficult to obtain a complete picture of the private-controlled PLCs than those state-owned ones. Extra caution should therefore be taken when applying the findings of my study to real practice.

APPENDIX

Table A4.1 provides the correlation matrix for variables used in Chapter 4.
Table A4.2 provides robustness check for results given in Table 4.4.
Table A 4.3 provides robustness check for results given in Table 4.6.
Table A 4.4 provides robustness check for results given in Table 4.9.
Table A5.1 provides the correlation matrix for variables used in Chapter 5.
Table A 5.2 provides robustness check for results given in Table 5.4.
Table A6.1 provides the correlation matrix for variables used in Chapter 6.
Table A 6.2 provides robustness check for results given in Table 6.5.
Table A 6.3 provides robustness check for results given in Table 6.5.

Table A4.1 Correlation matrix

Panel A									
	ROA	ROE	ROS	Topone	Top4_1	Boardsize	Boardshare	Independent	Duality
ROA	1								
ROE	0.8581	1							
ROS	0.7854	0.7467	1						
Topone	0.1651	0.1183	0.1312	1					

Top4_1	-0.0959	-0.0739	-0.0734	-0.7365	1				
Boardsize	0.0319	0.0388	0.035	0.012	0.034	1			
Boardshare	0.05	0.0361	0.0213	-0.1052	0.1426	-0.0087	1		
Independent	-0.0384	-0.0191	-0.0518	-0.132	0.0626	-0.0434	0.0682	1	
Duality	-0.0225	-0.018	-0.0097	-0.0284	0.0089	-0.0131	0.0262	-0.0244	1
Leverage	-0.3556	-0.2723	-0.3116	-0.1597	0.0908	0.0171	-0.0536	0.1547	0.0073
Lnsize	0.2104	0.1935	0.174	0.2085	-0.1887	0.2243	-0.0609	0.1452	-0.0384
Growth	0.2259	0.2212	0.1776	0.0095	0.0168	-0.0156	0.0099	0.026	-0.0061
Ms	0.0952	0.0886	0.0842	0.1021	-0.0603	0.167	-0.0342	-0.0527	-0.0196
Mcon	0.0761	0.024	0.0444	0.0303	0.002	0.0571	-0.0035	0.0191	-0.0198
SAMBLG	-0.0133	0.007	0.0008	0.0094	-0.1133	0.004	-0.0788	0.1188	0.0358
SOELG	0.0101	-0.0021	0.0282	0.1505	-0.0688	0.0277	-0.0718	-0.2861	-0.0197
SAMBCG	0.0289	0.0278	0.024	0.0551	-0.0569	0.0452	-0.0264	0.1259	-0.0491
SOECG	0.0491	0.0292	0.0267	0.1168	-0.0369	0.0989	-0.0347	-0.0863	-0.0413
Private	-0.0512	-0.0447	-0.0677	-0.3053	0.2713	-0.1397	0.2154	0.1823	0.0416

Panel B

	Leverage	Lnsize	Growth	Ms	Mcon	SAMBLG	SOELG	SAMBCG	SOECG
Leverage	1								
Lnsize	0.1749	1							
Growth	0.0934	0.061	1						
Ms	0.0773	0.3824	0.0656	1					

Mcon	-0.0539	0.0942	0.0091	0.1735	1				
SAMBLG	0.0452	0.1219	-0.0338	-0.0558	0.0218	1			
SOELG	-0.0735	-0.0654	-0.0267	0.0202	-0.0483	-0.4547	1		
SAMBCG	0.0162	0.1649	0.0185	0.1034	0.0597	-0.1713	-0.1627	1	
SOECG	-0.1085	0.014	-0.0028	0.1218	0.0653	-0.2458	-0.2336	-0.088	1
Private	0.1066	-0.1732	0.0611	-0.1133	-0.0559	-0.3511	-0.3336	-0.1256	-0.1803

Notes: This table provides the correlation matrix for variables used in Chapter 4.

Table A4.2 GMM Estimation - State vs. Private (robustness)

	(2.1)			(2.2)			(2.3)		
Performance=	ROA			ROE			ROS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	OLS	**Fixed**	**System-GMM**	**OLS**	**Fixed**	**System-GMM**	**OLS**	**Fixed**	**System-GMM**
$Performance_{it-1}$	0.3121***	-0.0273	0.1919***	0.0917***	-0.2342***	0.0483***	0.2022***	-0.0907***	0.0783***
	(12.92)	(-1.12)	(9.64)	(2.62)	(-6.56)	(2.87)	(5.80)	(-2.73)	(5.73)
$Performance_{it-2}$	0.0483**	-0.1729***	-0.1017***	-0.0668**	-0.2774***	-0.1795***	0.0109	-0.1904***	-0.0910***
	(2.33)	(-8.18)	(-7.33)	(-2.15)	(-7.98)	(-14.08)	(0.39)	(-6.84)	(-10.04)
$Boardsize_{it}$	0.0005	0.0001	-0.0006	0.0021	-0.0006	-0.0070**	0.0034**	0.0026	-0.0029
	(1.45)	(0.22)	(-0.69)	(1.60)	(-0.27)	(-2.54)	(2.39)	(0.90)	(-1.14)

$Duality_{it}$	0.0004	0.0060	0.0049	-0.0020	0.0124	0.0158	0.0104	0.0328*	0.0158
	(0.15)	(1.38)	(1.01)	(-0.18)	(0.74)	(0.95)	(0.91)	(1.66)	(1.08)
$Boardshare_{it}$	0.0484	0.5018*	-0.3761	-0.1005	1.3149	-2.9235***	-0.1440	1.7338	-1.8477*
	(0.59)	(1.78)	(-1.16)	(-0.51)	(1.29)	(-2.58)	(-0.53)	(1.20)	(-1.72)
$Independent_{it}$	0.0254**	0.0333**	0.0403*	0.0716*	0.0602	0.0608	0.1449***	0.1316**	0.1945***
	(2.32)	(2.24)	(1.74)	(1.84)	(1.22)	(0.91)	(3.37)	(2.23)	(2.66)
$Lnsize_{it}$	0.0019***	-0.0045*	0.0015	0.0116***	0.0061	0.0172*	0.0029	-0.0231**	0.0004
	(2.68)	(-1.91)	(0.60)	(4.41)	(0.82)	(1.70)	(1.00)	(-1.98)	(0.05)
$Leverage_{it}$	-0.0130***	-0.0222***	-0.0088***	-0.0758***	-0.1341***	-0.0622***	-0.0508***	-0.0792***	-0.0391***
	(-13.22)	(-15.78)	(-7.53)	(-13.41)	(-18.95)	(-13.55)	(-11.22)	(-11.81)	(-9.66)
$Growth_{it}$	0.0235***	0.0152***	0.0130***	0.0854***	0.0472***	0.0451***	0.0799***	0.0585***	0.0383***
	(13.47)	(9.28)	(4.86)	(13.21)	(7.31)	(5.12)	(10.31)	(7.54)	(4.64)
$State_{it}$	-0.0022	-0.0096*	-0.0099*	-0.0071	-0.0225	-0.0388**	0.0068	-0.0457*	-0.0360*
	(-1.09)	(-1.75)	(-1.71)	(-0.94)	(-1.19)	(-2.10)	(0.76)	(-1.89)	(-1.86)
$Topone_{it}$	0.0357	0.0984**	-0.0581	0.1797*	0.2536	0.0265	0.1401	0.3839*	0.2017
	(1.31)	(1.99)	(-0.98)	(1.85)	(1.43)	(0.14)	(1.23)	(1.91)	(1.28)
$Topone2_{it}$	0.0044	-0.0601	0.0758	-0.0762	-0.1011	0.0483	-0.0136	-0.1989	0.0451
	(0.16)	(-1.24)	(1.47)	(-0.77)	(-0.57)	(0.30)	(-0.12)	(-1.05)	(0.34)
$Top4\_1_{it}$	0.0055**	0.0057	0.0060	0.0231***	0.0256	0.0281	0.0177*	0.0378*	0.0628***
	(2.53)	(1.11)	(0.91)	(2.95)	(1.41)	(1.34)	(1.94)	(1.76)	(3.05)
Ms_{it}	0.2437***	0.5914***	0.3403*	1.5471***	3.1050***	2.4828***	0.8621***	1.2361	-0.1360

	(6.34)	(3.26)	(1.72)	(7.87)	(4.27)	(2.94)	(4.45)	(1.34)	(-0.20)
$Mcon_{it}$	-0.1054	-0.2293**	-0.0329	-0.8595**	-1.1895***	0.1504	-0.6867	-0.9813**	0.6895
	(-1.07)	(-2.25)	(-0.24)	(-2.20)	(-3.20)	(0.39)	(-1.40)	(-2.07)	(1.53)
Cons	-0.0385***	0.0559**	-0.0403	-0.1337***	0.0864	-0.1175	-0.1887***	0.1654	-0.4015**
	(-2.83)	(2.44)	(-0.79)	(-2.69)	(1.12)	(-0.59)	(-3.09)	(1.54)	(-2.24)
Obs	5238	5238	5238	5238	5238	5238	5238	5238	5238
R^2	0.3804	0.0616		0.3446	0.1399		0.2775	0.0356	
AR(1)			0.0000			0.0000			0.0000
AR(2)			0.9099			0.3126			0.2104
Sargan			0.2798			0.5486			0.6772

Notes: (1) Z-statistics are reported in brackets. P-values for AR (1), AR (2) and Sargan test are reported; (2) Time effect has been controlled in all regression models; (3)Industrial and regional effects are controlled in OLS and GMM regression models; (4) The Private is the base group in all models; (5) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator;(6) Instruments for the 'system-GMM' estimator are ROA,ROE, and ROS lagged t-3, and all other independent variables lagged t-2 to t-5 that are used as instruments in the first-differenced equations, with lagged first-differences of all independent variables as instruments in level equations; (7) * P-value≤10%,** P-value≤5%, and *** P-value≤1%.

Table A4.3 GMM Estimation - Tracing the ultimate controller (robustness)

	(3.1)			(3.2)			(3.3)		
Performance=	**ROA**			**ROE**			**ROS**		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	OLS	**Fixed**	**System-GMM**	**OLS**	**Fixed**	**System-GMM**	**OLS**	**Fixed**	**System-GMM**

$Performance_{it-1}$	0.3116***	-0.0274	0.2013***	0.0914***	-0.2341***	0.0854***	0.2024***	-0.0904***	0.0807***
	(12.91)	(-1.12)	(12.81)	(2.61)	(-6.55)	(6.12)	(5.80)	(-2.71)	(6.88)
$Performance_{it-2}$	0.0489**	-0.1713***	-0.0987***	-0.0668**	-0.2774***	-0.1716***	0.0114	-0.1895***	-0.0914***
	(2.36)	(-8.08)	(-8.86)	(-2.15)	(-7.96)	(-17.68)	(0.41)	(-6.77)	(-11.12)
$Boardsize_{it}$	0.0005	0.0001	0.0003	0.0021	-0.0006	0.0000	0.0033**	0.0026	-0.0023
	(1.36)	(0.21)	(0.41)	(1.59)	(-0.27)	(0.01)	(2.34)	(0.90)	(-0.97)
$Duality_{it}$	0.0007	0.0063	0.0032	-0.0018	0.0124	0.0126	0.0111	0.0337*	0.0168
	(0.25)	(1.44)	(0.79)	(-0.15)	(0.73)	(0.91)	(0.97)	(1.70)	(1.37)
$Boardshare_{it}$	0.0502	0.4979*	-0.1020	-0.0913	1.2980	-1.5352**	-0.1417	1.7669	-1.0124
	(0.61)	(1.79)	(-0.52)	(-0.47)	(1.27)	(-2.23)	(-0.52)	(1.23)	(-1.30)
$Independent_{it}$	0.0258**	0.0335**	0.0618***	0.0715*	0.0606	0.1384**	0.1459***	0.1332**	0.2293***
	(2.36)	(2.24)	(3.42)	(1.84)	(1.22)	(2.12)	(3.39)	(2.26)	(3.52)
$Lnsize_{it}$	0.0020***	-0.0044*	0.0073***	0.0116***	0.0060	0.0313***	0.0031	-0.0231**	0.0095
	(2.80)	(-1.87)	(4.35)	(4.38)	(0.81)	(5.15)	(1.07)	(-1.98)	(1.57)
$Leverage_{it}$	-0.0129***	-0.0222***	-0.0091***	-0.0757***	-0.1341***	-0.0564***	-0.0507***	-0.0794***	-0.0379***
	(-13.17)	(-15.80)	(-11.05)	(-13.39)	(-18.92)	(-15.79)	(-11.16)	(-11.84)	(-11.70)
$Growth_{it}$	0.0234***	0.0153***	0.0118***	0.0853***	0.0473***	0.0576***	0.0797***	0.0586***	0.0289***
	(13.47)	(9.32)	(5.82)	(13.19)	(7.30)	(8.40)	(10.29)	(7.54)	(4.46)
$Topone_{it}$	0.0355	0.1028**	-0.0133	0.1742*	0.2536	-0.1573	0.1402	0.3928*	0.1741
	(1.30)	(2.08)	(-0.29)	(1.80)	(1.43)	(-1.16)	(1.23)	(1.94)	(1.37)
$Topone2_{it}$	0.0028	-0.0657	0.0490	-0.0718	-0.0981	0.1788	-0.0176	-0.2139	0.0126

	(0.10)	(-1.35)	(1.13)	(-0.73)	(-0.55)	(1.40)	(-0.15)	(-1.12)	(0.11)
$Top4\_1_{it}$	0.0051**	0.0057	0.0030	0.0229***	0.0259	0.0096	0.0169*	0.0373*	0.0421***
	(2.36)	(1.12)	(0.68)	(2.90)	(1.43)	(0.67)	(1.84)	(1.74)	(2.70)
Ms_{it}	0.2344***	0.5877***	0.4761***	1.5291***	3.1015***	1.2222***	0.8423***	1.2168	0.4207
	(6.03)	(3.25)	(3.35)	(7.71)	(4.26)	(2.81)	(4.31)	(1.32)	(0.80)
$Mcon_{it}$	-0.1046	-0.2340**	-0.0624	-0.8446**	-1.1884***	-0.0390	-0.6873	-0.9943**	0.0522
	(-1.06)	(-2.28)	(-0.52)	(-2.16)	(-3.19)	(-0.55)	(-1.41)	(-2.10)	(0.13)
$SOECG_{it}$	0.0041	-0.0011	-0.0089	0.0033	-0.0115	-0.0476**	0.0189	-0.0277	-0.0100
	(1.50)	(-0.14)	(-1.32)	(0.33)	(-0.47)	(-2.33)	(1.64)	(-0.88)	(-0.48)
$SAMBCG_{it}$	-0.0009	-0.0065	-0.0067	0.0005	-0.0161	0.0016	0.0089	-0.0310	-0.0138
	(-0.28)	(-0.86)	(-1.10)	(0.04)	(-0.67)	(0.08)	(0.79)	(-1.03)	(-0.59)
$SOELG_{it}$	-0.0035	-0.0084	-0.0094**	-0.0164*	-0.0254	-0.0553***	0.0057	-0.0400	-0.0358**
	(-1.49)	(-1.55)	(-2.35)	(-1.86)	(-1.35)	(-3.64)	(0.54)	(-1.65)	(-2.30)
$SAMBLG_{it}$	-0.0030	-0.0125**	-0.0132***	-0.0051	-0.0220	-0.0321**	0.0044	-0.0574**	-0.0547***
	(-1.39)	(-2.17)	(-3.17)	(-0.63)	(-1.09)	(-2.13)	(0.46)	(-2.22)	(-3.49)
Cons	-0.0371***	0.0537**	-0.0920***	-0.1269**	0.0856	-0.1963**	-0.1866***	0.1619	-0.3255**
	(-2.72)	(2.34)	(-2.80)	(-2.56)	(1.10)	(-2.42)	(-3.04)	(1.50)	(-2.47)
Obs	5238	5238	5238	5238	5238	5238	5238	5238	5238
R^2	0.3816	0.0620		0.3453	0.1408		0.2778	0.0353	
AR(1)			0.0000			0.0000			0.0000
AR(2)			0.9928			0.4132			0.1978

Sargan			0.1865			0.3826			0.3847

Notes: (1) Z-statistics are reported in brackets. P-values for AR (1), AR (2) and Sargan test are reported; (2) Time effect has been controlled in all regression models; (3)Industrial and regional effects are controlled in OLS and GMM regression models; (4) The Private is the base group in all models; (5) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator;(6) Instruments for the 'system-GMM' estimator are ROA,ROE, and ROS lagged t-3, and all other independent variables lagged t-2 to t-6 that are used as instruments in the first-differenced equations, with lagged first-differences of all independent variables as instruments in level equations; (7) * P-value≤10%,** P-value≤5%, and *** P-value≤1%.

Table A4.4 Linear splines regression(robustness)

	(4.1)	(4.2)	(4.3)	(4.1)	(4.2)	(4.3)	(4.1)	(4.2)	(4.3)
Performance=	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	System-GMM	**System-GMM**	**System-GMM**	**System-GMM**	**System-GMM**	**System-GMM**	**System-GMM**	**System-GMM**	**System-GMM**
$Performance_{it-1}$	0.2092***	0.0525***	0.0783***	0.2290***	0.1503***	0.1191***	0.2492***	0.1492***	0.1188***
	(6.87)	(2.72)	(6.61)	(7.96)	(9.44)	(11.13)	(8.71)	(8.56)	(10.06)
$Performance_{it-2}$	-0.0857***	-0.1824***	-0.0916***	-0.0457**	-0.1230***	-0.0616***	-0.0414*	-0.1223***	-0.0604***
	(-3.88)	(-14.10)	(-10.77)	(-2.11)	(-9.71)	(-7.21)	(-1.86)	(-8.89)	(-6.53)
$Boardsize_{it}$	-0.0017	-0.0114***	-0.0026	-0.0027*	-0.0072**	-0.0057**	-0.0024	-0.0098***	-0.0060**
	(-1.03)	(-4.18)	(-1.08)	(-1.79)	(-2.51)	(-2.32)	(-1.52)	(-3.25)	(-2.45)
$Duality_{it}$	0.0012	0.0302*	0.0211	0.0029	0.0364**	0.0300**	0.0053	0.0328*	0.0377***
	(0.12)	(1.81)	(1.58)	(0.31)	(1.99)	(2.16)	(0.59)	(1.80)	(2.63)

$Boardshare_{it}$	0.3931	-3.6515***	-0.4705	0.5926	0.2931	-0.7232	0.5493	-1.3164	-1.0421
	(0.85)	(-2.74)	(-0.53)	(1.20)	(0.24)	(-0.87)	(1.03)	(-1.04)	(-1.11)
$Independent_{it}$	0.0197	0.0423	0.1914***	0.0490	0.1340*	0.2535***	0.0274	0.0525	0.2506***
	(0.49)	(0.63)	(2.78)	(1.25)	(1.92)	(3.65)	(0.67)	(0.71)	(3.59)
$Lnsize_{it}$	0.0048	0.0044	0.0062	0.0142**	0.0879***	0.0469***	0.0182***	0.0716***	0.0433***
	(1.17)	(0.48)	(0.94)	(2.41)	(5.85)	(4.81)	(2.91)	(4.41)	(4.15)
$Leverage_{it}$	-0.0081***	-0.0631***	-0.0356***	-0.0979***	-0.3447***	-0.3944***	-0.0911***	-0.3424***	-0.3855***
	(-3.71)	(-13.21)	(-10.00)	(-4.49)	(-7.11)	(-11.70)	(-4.25)	(-6.97)	(-11.27)
$Growth_{it}$	0.0290***	0.0576***	0.0519***	0.0381***	0.0656***	0.0759***	0.0384***	0.0604***	0.0754***
	(4.68)	(6.51)	(7.77)	(5.84)	(8.40)	(11.76)	(5.78)	(6.44)	(10.10)
$Top1_{it}$	0.0260	0.1287	0.0805**	-0.1083	-0.4230	2.3748***	-0.1261	0.3249*	0.1632
	(0.33)	(0.86)	(2.33)	(-0.21)	(-0.51)	(3.22)	(-1.50)	(1.90)	(1.53)
$Top2_{it}$	-0.0333	-0.2443*	-0.2716	0.0326	-0.0767	-2.4069***	0.0908	-0.4675***	-0.1658
	(-0.43)	(-1.66)	(-0.69)	(0.06)	(-0.09)	(-3.15)	(1.08)	(-2.64)	(-1.44)
$Top3_{it}$	0.0683	0.1060	0.0147	0.0299	0.3189	-0.0471	0.0436	0.0433	0.1522*
	(1.34)	(0.97)	(0.18)	(0.36)	(1.59)	(-0.38)	(0.83)	(0.38)	(1.68)
$Top4_{it}$	-0.1074	-0.6932*	0.1581	0.0315	0.0173	0.1763	-0.1661	-0.4462	0.0490
	(-0.59)	(-1.68)	(0.50)	(0.67)	(0.15)	(1.15)	(-0.92)	(-0.98)	(0.15)
$Top4\_1_{it}$	0.0018	-0.0160	0.0575***	-0.0135	-0.0316	0.0183	-0.0058	-0.0342	0.0493***
	(0.18)	(-0.79)	(3.31)	(-1.30)	(-1.44)	(1.10)	(-0.53)	(-1.40)	(2.89)

Ms_{it}	0.5945**	1.7513**	0.2521	0.7707**	1.7552**	0.7502	0.3965	0.4663	0.3338
	(1.99)	(2.15)	(0.44)	(2.27)	(2.20)	(1.39)	(1.21)	(0.65)	(0.61)
$Mcon_{it}$	-0.5280*	0.3899	0.4577	-0.5483*	0.4706	0.3505	-0.5521*	0.7550	0.6126
	(-1.80)	(0.86)	(1.10)	(-1.94)	(0.92)	(0.80)	(-1.95)	(1.49)	(1.35)
Cons	-0.1246*	-0.1316	-0.3357**	-0.3177*	-1.6571***	-1.5510***	-0.3549**	-1.3237***	-1.2540***
	(-1.68)	(-0.62)	(-2.14)	(-1.87)	(-4.56)	(-5.81)	(-2.41)	(-3.19)	(-4.45)
Obs	5238	5238	5238	5238	5238	5238	5238	5238	5238
R^2									
AR(1)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
AR(2)	0.8613	0.4108	0.1896	0.5619	0.2367	0.1838	0.6425	0.2223	0.1827
Sargan	0.3390	0.8809	0.6745	0.2581	0.6473	0.2914	0.4766	0.7210	0.5232

Notes: (1) Z-statistics are reported in brackets. P-values for AR (1), AR (2) and Sargan test are reported; (2) Time effect has been controlled in all regression models; (3)Industrial and regional effects are controlled in OLS and GMM regression models; (4) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator;(5) Instruments for the 'system-GMM' estimator are ROA,ROE, and ROS lagged t-3, and all other independent variables lagged t-2 to t-6 that are used as instruments in the first-differenced equations, with lagged first-differences of all independent variables as instruments in level equations; (6) * P-value≤10%,** P-value≤5%, and *** P-value≤1%.

Table A5.1 Correlation matrix

Panel A										
	CH	SIZE	LEV	CF	BANKDEBT	NWC	CAPEX	MKTBOOK	DIVIDEND	CV
CH	1									
SIZE	-0.1398	1								
LEV	-0.2657	0.2849	1							
CF	0.1095	0.139	-0.1314	1						
BANKDEBT	-0.3216	-0.0056	0.2925	-0.1833	1					
NWC	0.0173	-0.2089	-0.4629	-0.2738	-0.2309	1				
CAPEX	-0.1164	0.1351	-0.0163	0.2342	0.1856	-0.2413	1			
MKTBOOK	0.0825	-0.1337	0.0245	0.0486	-0.0466	-0.0081	-0.0428	1		
DIVIDEND	0.2025	0.0154	-0.3377	0.2229	-0.2139	0.0824	0.1454	0.1276	1	
CV	0.0232	0.0753	0.0884	-0.0774	-0.064	0.1706	-0.1396	0.0902	-0.046	1
TOPONE	0.0346	0.2021	-0.1572	0.1131	-0.1073	0.0844	0.0865	-0.2438	0.1138	-0.0404
BOARDSIZE	-0.0437	0.223	0.0503	0.0588	-0.0116	-0.0925	0.0717	-0.08	0.0159	-0.0162
INSIDERSHARE	0.0668	-0.089	-0.0487	-0.0204	-0.0453	0.0396	0.0498	0.0079	0.0792	-0.0268
INDEPENDENT	-0.071	0.1041	0.1521	0.0013	-0.0107	-0.0938	-0.0286	-0.0095	-0.077	0.0879
DUALITY	0.0255	-0.0352	-0.0063	-0.0284	0.0263	0.0028	0.0227	-0.0144	-0.0204	0.0344
TOP4_1	0.0034	-0.175	0.0531	-0.057	0.0487	-0.0108	-0.0266	0.0685	-0.0883	-0.0033
SAMBLG	-0.1131	0.1121	0.0772	0.0373	0.029	-0.1405	0.029	-0.0315	-0.014	0.0154
SOELG	0.0267	-0.078	-0.0729	-0.0107	0.0209	0.0412	0.0259	-0.0579	0.0393	-0.0644

PRIVATE	0.0336	-0.1404	0.0736	-0.0755	0.085	0.0476	-0.0453	0.0821	-0.0543	0.0455
SAMBCG	-0.0053	0.1612	0.0171	0.0101	-0.0996	-0.0029	-0.0084	0.0451	-0.0128	0.0038
SOECG	0.0149	-0.0178	-0.1141	0.0407	-0.0947	0.0973	-0.0186	-0.0057	0.0407	0.0089

Panel B

	TOPONE	BOARDSIZE	INSIDERSHARE	INDEPENDENT	DUALITY	TOP4_1	SAMBLG	SOELG	PRIVATE	SAMBCG
TOPONE	1									
BOARDSIZE	0.0248	1								
INSIDERSHARE	-0.1272	-0.0227	1							
INDEPENDENT	-0.1344	-0.0724	0.0611	1						
DUALITY	-0.016	-0.0328	0.032	-0.0106	1					
TOP4_1	-0.7235	0.0261	0.1935	0.0602	0.0107	1				
SAMBLG	-0.0121	-0.0026	-0.0838	0.125	0.0516	-0.1132	1			
SOELG	0.1495	0.0364	-0.0698	-0.2507	-0.0257	-0.0534	-0.4602	1		
PRIVATE	-0.2924	-0.1471	0.2393	0.1584	0.0486	0.262	-0.3501	-0.2857	1	
SAMBCG	0.0562	0.0398	-0.0308	0.093	-0.0617	-0.0563	-0.2022	-0.165	-0.1255	1
SOECG	0.1141	0.0965	-0.0387	-0.0994	-0.0506	-0.0248	-0.2776	-0.2265	-0.1723	-0.0995

Notes: This table provides the correlation matrix for variables used in Chapter 5.

Table A5. 2 Estimation results for the dynamic partial adjustment model (robustness)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM	OLS	Fixed	System-GMM
CH_{it-1}	0.6602***	0.3272***	0.4353***	0.6075***	0.3233***	0.3769***	0.4896***	0.2606***	0.2714***
	(23.70)	(7.16)	(18.39)	(16.23)	(5.64)	(23.19)	(8.21)	(3.94)	(14.75)
$CH_{it-1} * SOECG_{it}$	0.0075	0.0832*	0.1298***	0.0049	0.0567	0.1658***	0.1032	-0.0045	0.2169***
	(0.20)	(1.67)	(3.55)	(0.10)	(0.89)	(5.71)	(1.45)	(-0.05)	(7.53)
$CH_{it-1} * SAMBCG_{it}$	0.0734*	0.0968*	0.1627***	0.1134*	0.0793	0.1510***	0.1557**	0.0076	0.2134***
	(1.68)	(1.67)	(3.81)	(1.78)	(0.97)	(5.64)	(2.13)	(0.08)	(7.19)
$CH_{it-1} * SOELG_{it}$	0.0740	-0.0363	0.1502***	0.1043	-0.0656	0.1797***	0.2693***	0.1126	0.2437***
	(1.52)	(-0.39)	(3.30)	(1.51)	(-0.48)	(5.83)	(3.06)	(0.74)	(5.07)
$CH_{it-1} * SAMBLG_{it}$	0.0375	0.0055	0.1669***	0.0553	-0.0010	0.1745***	0.1523**	-0.0912	0.1952***
	(1.08)	(0.11)	(4.07)	(1.16)	(-0.01)	(5.71)	(2.00)	(-1.14)	(3.51)
$BOARDSIZE_{it}$	-0.0001	-0.0010	-0.0001	-0.0008	-0.0022	-0.0026*	-0.0025	-0.0025	-0.0060**
	(-0.15)	(-1.11)	(-0.13)	(-1.03)	(-1.52)	(-1.87)	(-1.36)	(-0.73)	(-2.16)
$INDEPENDENT_{it}$	-0.0237	-0.2107	0.1715***	-0.0697	-0.3963*	-0.1994***	-0.1116	-0.2462	-0.2612
	(-0.87)	(-1.50)	(3.00)	(-1.31)	(-1.69)	(-2.62)	(-1.13)	(-0.62)	(-1.49)
$INSIDERSHARE_{it}$	0.0020	0.0101	0.0251	-0.0174	-0.0116	0.0595*	0.0718	0.0942	0.2300***
	(0.14)	(0.49)	(1.01)	(-0.62)	(-0.30)	(1.66)	(1.28)	(1.30)	(3.67)

$DUALITY_{it}$	-0.0010	-0.0055	0.0062	0.0002	-0.0132	0.0054	0.0020	0.0020	0.0514***
	(-0.29)	(-0.77)	(1.27)	(0.03)	(-1.05)	(0.86)	(0.14)	(0.06)	(3.86)
$SIZE_{it}$	-0.0028***	-0.0040	-0.0074***	0.0732	0.1325	0.0370	0.0109**	0.1129***	0.0119
	(-2.85)	(-1.23)	(-3.22)	(1.22)	(1.08)	(0.44)	(2.40)	(4.57)	(1.04)
LEV_{it}	-0.0065***	-0.0214***	-0.0043	-0.0813	-0.1106	0.0150	-0.3148***	-0.6209***	-0.7476***
	(-4.05)	(-6.62)	(-1.44)	(-1.31)	(-0.92)	(0.20)	(-6.74)	(-6.70)	(-15.23)
CF_{it}	0.2719***	0.2229***	0.3242***	0.0016	0.0264**	0.0332***	0.0081	-0.0403	0.1926***
	(15.29)	(10.14)	(12.99)	(0.33)	(2.06)	(3.64)	(0.10)	(-0.46)	(3.07)
$BANKDEBT_{it}$	-0.0270***	-0.0086	-0.0141	-0.0031	0.0370***	0.0057	0.0022	0.0365	0.1494***
	(-4.97)	(-0.78)	(-1.50)	(-1.47)	(3.16)	(1.04)	(0.10)	(0.85)	(5.31)
NWC_{it}	-0.0572***	-0.1656***	-0.0870***	-0.0114***	-0.0441***	-0.0183***	-0.2438***	-0.5823***	-0.4987***
	(-7.08)	(-9.65)	(-5.63)	(-3.57)	(-6.78)	(-4.51)	(-6.24)	(-7.24)	(-10.89)
$CAPEX_{it}$	-0.2743***	-0.2118***	-0.2312***	0.4348***	0.3667***	0.4356***	-0.5310***	-0.2194**	-0.1982***
	(-14.54)	(-8.14)	(-9.23)	(14.47)	(9.30)	(16.19)	(-6.88)	(-2.25)	(-2.98)
$MKTBOOK_{it}$	0.0021	0.0042	0.0032	-0.0430***	-0.0134	-0.0077	0.0118	0.0192*	0.0423***
	(0.78)	(1.25)	(1.12)	(-4.23)	(-0.68)	(-0.58)	(1.22)	(1.68)	(5.48)
$DIVIDEND_{it}$	-0.0881	0.1554	-0.1738	-0.1005***	-0.2778***	-0.1567***	-0.6815	-0.0594	-1.0244
	(-0.53)	(0.71)	(-0.66)	(-6.52)	(-8.17)	(-8.33)	(-1.08)	(-0.07)	(-1.50)
CV_{it}	0.0657	0.0304	0.1902***	0.3388***	0.2261***	0.2634***	-0.1026	-0.2521	-0.1075
	(1.18)	(0.50)	(3.31)	(10.70)	(5.58)	(8.49)	(-0.50)	(-1.04)	(-0.65)

$TOPONE_{it}$	0.0283	0.1040	0.0585	0.0001	0.0023	0.0134***	-0.0039	0.1916	0.2434
	(0.84)	(1.52)	(1.01)	(0.02)	(0.38)	(3.20)	(-0.03)	(0.67)	(1.48)
$TOPONE2_{it}$	-0.0356	-0.0900	-0.0222	0.5494*	1.6481***	0.6189**	0.0389	-0.1104	0.0248
	(-1.04)	(-1.32)	(-0.40)	(1.90)	(4.10)	(2.25)	(0.28)	(-0.39)	(0.16)
$TOP4\_1_{it}$	-0.0013	0.0155**	0.0177***	0.1857***	0.1530**	-0.1353***	0.0109	0.0494*	0.1135***
	(-0.46)	(2.12)	(2.88)	(2.75)	(2.20)	(-2.82)	(0.98)	(1.69)	(6.22)
$SOECG_{it}$	-0.0154**	-0.0356***	-0.0231**	-0.0276**	-0.0467**	-0.0327**	-0.0808***	-0.0419	-0.1244***
	(-2.21)	(-3.29)	(-2.24)	(-2.24)	(-2.39)	(-2.43)	(-3.27)	(-1.04)	(-4.44)
$SAMBCG_{it}$	-0.0203***	-0.0228*	-0.0168*	-0.0209	-0.0063	-0.0296**	-0.1003***	-0.0388	-0.0951***
	(-2.94)	(-1.84)	(-1.77)	(-1.62)	(-0.29)	(-2.30)	(-4.03)	(-0.91)	(-3.34)
$SOELG_{it}$	-0.0022	-0.0245***	-0.0161**	-0.0048	-0.0305**	-0.0397***	-0.0454*	-0.0217	-0.0808***
	(-0.38)	(-2.84)	(-1.99)	(-0.48)	(-2.21)	(-3.59)	(-1.92)	(-0.66)	(-3.84)
$SAMBLG_{it}$	-0.0085	-0.0114	-0.0179**	-0.0198**	-0.0210	-0.0356***	-0.0719***	-0.0128	-0.0362*
	(-1.61)	(-1.46)	(-2.21)	(-2.26)	(-1.64)	(-3.43)	(-3.25)	(-0.41)	(-1.71)
Cons	0.0735***	0.1209***	0.1556***	0.1486***	-0.6796***	0.1161	0.0434	-2.0652***	0.4454
	(4.09)	(3.44)	(2.78)	(2.70)	(-2.75)	(0.83)	(0.38)	(-3.98)	(1.39)
Obs	4273	4273	4273	4273	4273	4273	4273	4273	4273
R^2	4273	4273	4273	4273	4273	4273	4273	4273	4273
AR(1)	0.6626	0.4782		0.6748	0.4237		0.574	0.229	
AR(2)			0			0			0

Sargan			0.9126			0.3068			0.981

Notes: (1) Dependent variable is CH_{it}; (2) Time-effects are included in all columns;(3) Industrial and regional effects are controlled in columns (1) and (3); (4)T-statistics are reported in brackets in columns (1) and (2), while Z-statistics are reported in brackets in column (3); (5) Appropriate instrument sets are selected and justified using Sargan and serial correlation tests for the 'System-GMM' estimator; (6)Instruments for the 'system-GMM' estimator are CH_t lagged t-2, and all other independent variables lagged t-2 to t-5 are used as instruments in the first-differenced equations, with lagged first-differences of all independent variables as instruments in level equations; (7) * P-value≤10%, ** P-value≤5% and *** P-value≤1%.

Table A6.1 Correlation matrix

Panel A

	CT	ROAI	ROEI	ROSI	SIZE	LEV	AGE	TENURE	COMPENSATION
CT	1								
ROAI	-0.1142	1							
ROEI	-0.0993	0.7918	1						
ROSI	-0.102	0.7791	0.6277	1					
SIZE	-0.0914	0.2689	0.2118	0.2214	1				
LEV	0.0432	-0.3467	-0.2605	-0.2823	0.1057	1			
AGE	-0.0165	0.0915	0.0794	0.086	0.2092	-0.1061	1		
TENURE	-0.1268	0.1305	0.0905	0.098	0.1417	-0.0778	0.2497	1	
COMPENSATION	0.0105	0.0775	0.0461	0.0384	-0.0436	-0.0434	-0.0177	0.0245	1
BOARDSIZE	-0.0561	0.0482	0.0446	0.0519	0.2274	-0.0065	0.0851	0.0443	-0.0018
DUALITY	-0.009	-0.0466	-0.0354	-0.035	-0.0624	0.0338	0.0258	0.0178	0.0671
INDEPENDENT	0.0072	0.0111	-0.0109	-0.0201	0.0761	0.1125	-0.0761	-0.0209	0.0613

TOPONE	-0.0341	0.1527	0.1147	0.1308	0.2507	-0.1654	0.1585	0.0638	-0.0614
TOP4_1	0.0549	-0.0934	-0.0695	-0.086	-0.2211	0.0888	-0.1458	-0.0982	0.0657
SOELG	-0.0094	0.0107	0.0025	0.0305	-0.0414	-0.0646	0.0227	0.0181	-0.0543
SOECG	-0.0143	0.0365	0.0319	0.0209	0.0164	-0.1113	0.0468	0.0543	-0.0229
SAMBLG	-0.0533	0.0111	0.0093	0.0188	0.136	0.019	0.1014	0.0595	-0.0718
SAMBCG	-0.0365	0.0275	0.0127	0.0321	0.1689	0.0078	0.0419	-0.0074	-0.0185

Panel B

	BOARDSIZE	DUALITY	INDEPENDENT	TOPONE	TOP4_1	SOELG	SOECG	SAMBLG	SAMBCG
BOARDSIZE	1								
DUALITY	-0.051	1							
INDEPENDENT	-0.0889	0.0053	1						
TOPONE	0.0284	-0.0499	-0.1183	1					
TOP4_1	0.0211	0.0281	0.0525	-0.7342	1				
SOELG	0.0324	-0.0227	-0.2624	0.1259	-0.0572	1			
SOECG	0.1193	-0.0418	-0.0865	0.1311	-0.0417	-0.215	1		
SAMBLG	0.0132	0.0226	0.0814	0.0377	-0.1224	-0.4233	-0.2462	1	
SAMBCG	0.0427	-0.0365	0.1079	0.0705	-0.0675	-0.1595	-0.0928	-0.1826	1

Notes: This table provides the correlation matrix for variables used in Chapter 6.

Table A6.2 Estimates of multinomial logistic models (robustness)

Estimates of multinomial logistic models relating to the probability of CEO turnovers to firm performance, ownership structure, board structure, CEO personal characteristics and firm characteristics.									
	1.Change of job			*2.Resignation*			*3.Personal reasons*		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-3.1632***	-0.3966	-0.3611**	-4.8210***	-1.1436***	-0.5840***	-3.6263**	-0.6841	-0.3984
	(-2.94)	(-1.28)	(-2.06)	(-4.30)	(-3.89)	(-3.30)	(-2.00)	(-1.47)	(-1.33)
$SIZE_{it}$	-0.0198	-0.0492	-0.0415	-0.2253***	-0.2618***	-0.2740***	-0.0922	-0.1242	-0.1348
	(-0.38)	(-0.97)	(-0.82)	(-3.26)	(-3.86)	(-4.03)	(-0.68)	(-0.95)	(-1.02)
LEV_{it}	0.4795**	0.6390***	0.5869**	0.5499*	0.7128**	0.8034***	2.1579***	2.2810***	2.3802***
	(1.99)	(2.74)	(2.51)	(1.82)	(2.39)	(2.73)	(3.35)	(3.71)	(3.85)
AGE_{it}	-0.0055	-0.0049	-0.0049	0.0073	0.0079	0.0078	0.0762***	0.0767***	0.0773***
	(-0.75)	(-0.68)	(-0.67)	(0.78)	(0.85)	(0.85)	(4.25)	(4.27)	(4.31)
$TENURE_{it}$	-0.2162***	-0.2191***	-0.2182***	-0.3210***	-0.3292***	-0.3246***	-0.3326***	-0.3360***	-0.3375***
	(-8.67)	(-8.80)	(-8.77)	(-8.83)	(-9.06)	(-8.94)	(-4.57)	(-4.66)	(-4.64)
$BOARDSIZE_{it}$	-0.0024	-0.0006	-0.0001	0.0062	0.0097	0.0100	0.0856*	0.0881*	0.0887*
	(-0.12)	(-0.03)	(-0.00)	(0.23)	(0.37)	(0.38)	(1.69)	(1.74)	(1.76)
$INDEPENDENT_{it}$	0.6631	0.6144	0.6252	0.0210	-0.0538	-0.0463	1.1446	0.9434	1.0457
	(1.10)	(1.02)	(1.04)	(0.03)	(-0.07)	(-0.06)	(0.70)	(0.57)	(0.63)
$TOPONE_{it}$	0.8421	0.5504	0.6129	1.6212	1.1603	1.2519	11.7135**	11.2035**	11.1535**
	(0.52)	(0.34)	(0.38)	(0.75)	(0.54)	(0.58)	(2.45)	(2.35)	(2.34)
$TOPONE2_{it}$	-0.9796	-0.7056	-0.7519	-2.6507	-2.2513	-2.2826	-9.8115*	-9.2492*	-9.2246*
	(-0.59)	(-0.42)	(-0.45)	(-1.15)	(-0.98)	(-0.99)	(-1.96)	(-1.85)	(-1.85)
$TOP4\_1_{it}$	-0.0185	-0.0355	-0.0323	0.1275	0.1043	0.1093	1.0126***	0.9943***	0.9881***
	(-0.15)	(-0.28)	(-0.26)	(0.80)	(0.66)	(0.69)	(3.02)	(2.96)	(2.95)

$COMPENSATION_{it}$	-0.9310***	-0.9321***	-0.9382***	-0.9342***	-0.9178***	-0.9441***	-0.5492*	-0.5403*	-0.5532*
	(-7.70)	(-7.71)	(-7.76)	(-5.59)	(-5.49)	(-5.66)	(-1.73)	(-1.70)	(-1.74)
$DUALITY_{it}$	-0.7173***	-0.7160***	-0.7112***	-0.1665	-0.1529	-0.1527	0.1140	0.1297	0.1095
	(-3.80)	(-3.79)	(-3.77)	(-0.85)	(-0.78)	(-0.78)	(0.32)	(0.37)	(0.31)
$PERF_{it-1} * SOELG_{it}$	0.2706	-0.2832	-0.2533	0.7612	0.0918	-0.1291	1.2951	-0.0905	-0.3256
	(0.20)	(-0.74)	(-1.21)	(0.54)	(0.25)	(-0.62)	(0.42)	(-0.12)	(-0.92)
$PERF_{it-1} * SOECG_{it}$	3.6138	0.8115	0.4292	0.8537	1.9892**	-0.2101	0.6973	3.1984**	0.7263
	(1.56)	(1.08)	(0.72)	(0.41)	(2.19)	(-0.46)	(0.16)	(2.22)	(0.36)
$PERF_{it-1} * SAMBLG_{it}$	1.2852	0.0032	0.0827	1.2241	0.0649	0.2478	-1.0314	-0.3445	-0.0171
	(0.88)	(0.01)	(0.38)	(0.77)	(0.17)	(0.91)	(-0.41)	(-0.46)	(-0.04)
$PERF_{it-1} * SAMBCG_{it}$	-2.8484	-0.8151	-1.4718	-1.1439	0.6544	-0.5458	13.6189	1.8083	1.9417
	(-1.17)	(-1.35)	(-1.64)	(-0.38)	(0.78)	(-0.44)	(0.68)	(0.46)	(0.29)
$SOELG_{it}$	-0.0046	-0.0136	-0.0069	-0.1137	-0.1149	-0.0963	-0.7060**	-0.7509**	-0.7518**
	(-0.04)	(-0.11)	(-0.05)	(-0.68)	(-0.70)	(-0.60)	(-2.09)	(-2.24)	(-2.28)
$SOECG_{it}$	-0.0705	-0.0675	-0.0657	-0.1923	-0.1089	-0.1844	-1.1103**	-1.1832**	-1.0520**
	(-0.43)	(-0.42)	(-0.40)	(-0.86)	(-0.51)	(-0.83)	(-2.25)	(-2.35)	(-2.19)
$SAMBLG_{it}$	-0.2082*	-0.2086*	-0.2026*	-0.3177*	-0.3170*	-0.2702*	-1.2922***	-1.2653***	-1.2152***
	(-1.70)	(-1.72)	(-1.67)	(-1.92)	(-1.95)	(-1.68)	(-4.01)	(-3.99)	(-3.92)
$SAMBCG_{it}$	-0.1065	-0.0968	-0.0801	-0.1004	0.0098	-0.0146	-2.9685***	-2.8779***	-2.8697***
	(-0.56)	(-0.51)	(-0.42)	(-0.36)	(0.04)	(-0.05)	(-2.67)	(-2.77)	(-2.76)
Cons	-1.0186	-0.4220	-0.5863	2.7077*	3.4696**	3.6578**	-9.3125***	-8.5724***	-8.4506***
	(-0.88)	(-0.37)	(-0.51)	(1.74)	(2.27)	(2.38)	(-2.98)	(-2.81)	(-2.76)
	4.Dismissal			***5.Contract expiration***			***6.Corporate governance reform***		
	(1)	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-5.2388**	-0.5010	-0.7151*	-5.4527***	-1.1826***	-0.6980***	8.9913	1.3882	-0.0510

	(-2.01)	(-0.61)	(-1.93)	(-4.33)	(-3.59)	(-3.44)	(1.48)	(0.64)	(-0.06)
$SIZE_{it}$	-0.2794	-0.4209**	-0.3352*	-0.0429	-0.0562	-0.0783	0.1905	0.2372	0.2323
	(-1.57)	(-2.46)	(-1.91)	(-0.59)	(-0.79)	(-1.11)	(0.96)	(1.23)	(1.20)
LEV_{it}	0.3633	0.9980	0.6244	-0.1608	-0.1052	0.0512	-0.7627	-1.2469	-1.0530
	(0.49)	(1.37)	(0.85)	(-0.48)	(-0.32)	(0.16)	(-0.84)	(-1.43)	(-1.17)
AGE_{it}	0.0177	0.0204	0.0202	0.0348***	0.0352***	0.0350***	0.0118	0.0084	0.0074
	(0.79)	(0.91)	(0.90)	(3.68)	(3.72)	(3.71)	(0.50)	(0.36)	(0.31)
$TENURE_{it}$	-0.4322***	-0.4474***	-0.4359***	-0.0510*	-0.0551*	-0.0531*	-0.2313**	-0.2294**	-0.2260**
	(-4.29)	(-4.46)	(-4.33)	(-1.70)	(-1.84)	(-1.78)	(-2.50)	(-2.49)	(-2.44)
$BOARDSIZE_{it}$	-0.0806	-0.0768	-0.0755	-0.0587**	-0.0565*	-0.0571**	-0.2215***	-0.2212***	-0.2203***
	(-1.17)	(-1.13)	(-1.10)	(-2.02)	(-1.95)	(-1.97)	(-2.83)	(-2.83)	(-2.80)
$INDEPENDENT_{it}$	5.6705***	5.4301***	5.6164***	2.0519**	1.9815**	1.9896**	0.0772	0.2829	0.2756
	(3.19)	(3.04)	(3.15)	(2.44)	(2.35)	(2.36)	(0.04)	(0.16)	(0.15)
$TOPONE_{it}$	6.6960	4.9875	6.3186	0.9436	0.6467	0.5891	-8.1477	-8.1966	-8.4037
	(1.13)	(0.85)	(1.07)	(0.43)	(0.30)	(0.27)	(-1.55)	(-1.59)	(-1.62)
$TOPONE2_{it}$	-6.0450	-4.1121	-5.5961	-0.0571	0.2366	0.3370	5.6532	5.8545	6.0465
	(-1.01)	(-0.69)	(-0.94)	(-0.03)	(0.10)	(0.15)	(1.01)	(1.06)	(1.10)
$TOP4\_1_{it}$	0.1188	0.0681	0.1110	0.2515	0.2441	0.2393	-0.4782	-0.4532	-0.4889
	(0.26)	(0.15)	(0.24)	(1.45)	(1.41)	(1.38)	(-1.17)	(-1.12)	(-1.21)
$COMPENSATION_{it}$	-0.8374**	-0.8431**	-0.8163*	-0.5718***	-0.5756***	-0.5763***	-1.1089**	-1.0884**	-1.0899**
	(-1.97)	(-1.99)	(-1.92)	(-3.85)	(-3.88)	(-3.88)	(-2.57)	(-2.53)	(-2.53)
$DUALITY_{it}$	-0.1300	-0.0804	-0.2241	-0.0711	-0.0719	-0.0584	-1.6108	-1.6362	-1.7284*
	(-0.28)	(-0.18)	(-0.47)	(-0.35)	(-0.36)	(-0.29)	(-1.58)	(-1.60)	(-1.68)
$PERF_{it-1} * SOELG_{it}$	0.3912	-0.5796	-0.1562	2.3329	0.3876	0.0965	-8.3118	-1.1646	-0.1003
	(0.14)	(-0.69)	(-0.42)	(1.22)	(0.75)	(0.31)	(-1.35)	(-0.48)	(-0.10)
$PERF_{it-1} * SOECG_{it}$	3.0090	0.5711	1.2363	1.9880	0.0010	0.0956	9.9958	3.0552	3.8909

	(0.52)	(0.26)	(0.53)	(0.78)	(0.00)	(0.16)	(1.03)	(1.56)	(1.50)
$PERF_{it-1} * SAMBLG_{it}$	-2.6516	-0.1106	-0.3707*	1.8398	-0.0642	0.2455	-6.9727	-1.4648	1.1377
	(-1.04)	(-0.11)	(-1.66)	(1.06)	(-0.15)	(0.84)	(-1.01)	(-0.59)	(0.55)
$PERF_{it-1} * SAMBCG_{it}$	5.8257	0.3472	0.6078	13.1610**	2.4401*	3.1622*	-8.7825	-1.1485	-0.2346
	(0.32)	(0.10)	(0.10)	(2.48)	(1.72)	(1.74)	(-0.00)	(-0.00)	(-0.00)
$SOELG_{it}$	0.3220	0.2801	0.3382	-0.3154*	-0.3378*	-0.3169*	-0.3565	-0.4578	-0.4430
	(0.72)	(0.64)	(0.77)	(-1.76)	(-1.91)	(-1.79)	(-0.81)	(-1.05)	(-1.03)
$SOECG_{it}$	0.3268	0.3276	0.3619	-0.4498*	-0.4839**	-0.4454*	-0.2208	-0.0818	-0.1216
	(0.59)	(0.60)	(0.66)	(-1.95)	(-2.09)	(-1.93)	(-0.36)	(-0.15)	(-0.21)
$SAMBLG_{it}$	0.1990	0.4147	0.2836	-0.3800**	-0.4053**	-0.3576**	-0.3174	-0.4248	-0.4186
	(0.47)	(1.03)	(0.70)	(-2.27)	(-2.45)	(-2.17)	(-0.70)	(-0.96)	(-0.95)
$SAMBCG_{it}$	-0.8987	-0.8598	-0.8789	-0.6666**	-0.5639*	-0.5846*	-13.0056	-14.2378	-13.3690
	(-0.84)	(-0.80)	(-0.82)	(-2.07)	(-1.88)	(-1.91)	(-0.03)	(-0.02)	(-0.02)
Cons	-1.3169	1.6086	-0.3281	-3.4006**	-3.0933*	-2.6842*	-3.7022	-4.3217	-4.2210
	(-0.33)	(0.42)	(-0.08)	(-2.10)	(-1.95)	(-1.69)	(-0.84)	(-1.00)	(-0.99)
Obs	6072			6072			6072		
Pseudo $-R^2$	0.0848			0.0828			0.0827		

Notes: (1) The multinomial logistic model can be thought of as simultaneously estimating binary logistics for comparisons among all alternatives; (2) Time, regional and industrial effects are controlled in all columns; (3) Z-statistics are reported in brackets; (4) * P-value≤10%, ** P-value≤5%, and *** P-value≤1%.

Table A6.3 Estimates of multinomial logistic models (robustness)

Estimates of multinomial logistic models relating to the probability of CEO turnovers to firm performance, ownership structure, board structure, CEO personal characteristics and firm characteristics.									
	1.Change of job			*2.Resignation*			*3.Personal reasons*		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-4.1129***	-0.8243***	-0.5217***	-6.1797***	-1.7336***	-0.8327***	-5.3899***	-0.8708	-0.6480**
	(-3.83)	(-2.62)	(-2.92)	(-5.52)	(-5.72)	(-4.69)	(-3.01)	(-1.61)	(-2.10)
$SIZE_{it}$	0.0196	0.0154	0.0136	-0.0895**	-0.0937**	-0.0938**	-0.0709	-0.0859	-0.0844
	(0.57)	(0.45)	(0.40)	(-2.06)	(-2.15)	(-2.16)	(-0.80)	(-0.98)	(-0.96)
LEV_{it}	-0.0220	-0.0220	-0.0129	-0.0278	-0.0495*	-0.0122	0.0730*	0.0771	0.0888**
	(-0.93)	(-0.90)	(-0.55)	(-0.98)	(-1.65)	(-0.43)	(1.66)	(1.63)	(2.04)
AGE_{it}	-0.0126*	-0.0127*	-0.0126*	-0.0031	-0.0035	-0.0035	0.0681***	0.0691***	0.0684***
	(-1.75)	(-1.77)	(-1.74)	(-0.33)	(-0.37)	(-0.37)	(3.83)	(3.87)	(3.84)
$TENURE_{it}$	-0.2415***	-0.2461***	-0.2448***	-0.3468***	-0.3576***	-0.3543***	-0.3462***	-0.3567***	-0.3543***
	(-9.79)	(-9.99)	(-9.95)	(-9.59)	(-9.89)	(-9.81)	(-4.78)	(-4.96)	(-4.89)
$BOARDSIZE_{it}$	-0.0044	-0.0044	-0.0032	-0.0040	-0.0026	-0.0023	0.0769	0.0821	0.0786
	(-0.22)	(-0.22)	(-0.16)	(-0.15)	(-0.10)	(-0.09)	(1.52)	(1.62)	(1.55)
$INDEPENDENT_{it}$	0.7021	0.6195	0.6345	0.0049	-0.1119	-0.0993	0.9211	0.7772	0.8379
	(1.17)	(1.04)	(1.06)	(0.01)	(-0.14)	(-0.13)	(0.56)	(0.47)	(0.50)
$TOPONE_{it}$	0.8433	0.5300	0.6184	2.6027	2.0526	2.2683	11.8606**	10.8922**	11.1150**
	(0.53)	(0.33)	(0.39)	(1.22)	(0.97)	(1.07)	(2.46)	(2.27)	(2.32)
$TOPONE2_{it}$	-0.7131	-0.5015	-0.5461	-3.5473	-3.1894	-3.3360	-10.1550**	-9.3173*	-9.5453*
	(-0.43)	(-0.31)	(-0.33)	(-1.55)	(-1.40)	(-1.46)	(-2.01)	(-1.85)	(-1.90)
$TOP4\_1_{it}$	0.0848	0.0637	0.0688	0.2461	0.2167	0.2293	0.9959***	0.9504***	0.9537***
	(0.68)	(0.52)	(0.56)	(1.57)	(1.39)	(1.47)	(2.97)	(2.85)	(2.86)

$COMPENSATION_{it}$	-65.8316	-77.0004	-76.9792	-58.3648	-71.9841	-76.5168	67.3361	50.4596	52.8702
	(-1.28)	(-1.49)	(-1.49)	(-0.83)	(-1.02)	(-1.08)	(1.21)	(0.92)	(0.96)
$DUALITY_{it}$	-0.7396***	-0.7293***	-0.7254***	-0.1634	-0.1390	-0.1308	0.0567	0.0861	0.0643
	(-3.94)	(-3.89)	(-3.86)	(-0.84)	(-0.72)	(-0.67)	(0.16)	(0.24)	(0.18)
$PERF_{it-1} * SOELG_{it}$	0.2553	-0.1603	-0.2723	0.7071	0.2520	-0.1357	1.1271	-0.2351	-0.3184
	(0.19)	(-0.41)	(-1.26)	(0.49)	(0.66)	(-0.64)	(0.36)	(-0.30)	(-0.90)
$PERF_{it-1} * SOECG_{it}$	4.1071*	1.1674	0.5683	1.3488	2.4170***	-0.1201	0.2020	3.9473***	0.5661
	(1.79)	(1.53)	(0.94)	(0.65)	(2.60)	(-0.27)	(0.05)	(2.86)	(0.30)
$PERF_{it-1} * SAMBLG_{it}$	1.1748	0.0560	0.0443	0.8963	0.0641	0.1641	-0.6755	-0.4559	-0.0150
	(0.81)	(0.14)	(0.20)	(0.58)	(0.16)	(0.64)	(-0.27)	(-0.59)	(-0.03)
$PERF_{it-1} * SAMBCG_{it}$	-2.6962	-0.6772	-1.4406	-1.0199	0.8427	-0.6693	12.5923	2.4018	1.6163
	(-1.10)	(-1.12)	(-1.60)	(-0.34)	(0.98)	(-0.56)	(0.66)	(0.49)	(0.25)
$SOELG_{it}$	-0.0930	-0.1062	-0.0973	-0.1907	-0.1866	-0.1731	-0.7208**	-0.7890**	-0.7598**
	(-0.72)	(-0.83)	(-0.76)	(-1.15)	(-1.13)	(-1.07)	(-2.10)	(-2.31)	(-2.26)
$SOECG_{it}$	-0.1815	-0.1877	-0.1821	-0.3106	-0.2306	-0.3182	-1.1778**	-1.2890**	-1.1339**
	(-1.11)	(-1.16)	(-1.12)	(-1.39)	(-1.07)	(-1.44)	(-2.39)	(-2.55)	(-2.36)
$SAMBLG_{it}$	-0.3249***	-0.3314***	-0.3216***	-0.4552***	-0.4492***	-0.4110**	-1.2702***	-1.2691***	-1.2042***
	(-2.65)	(-2.73)	(-2.65)	(-2.73)	(-2.72)	(-2.53)	(-3.89)	(-3.95)	(-3.82)
$SAMBCG_{it}$	-0.1543	-0.1624	-0.1363	-0.2098	-0.1107	-0.1435	-2.9439***	-2.8872***	-2.8797***
	(-0.81)	(-0.86)	(-0.73)	(-0.77)	(-0.42)	(-0.54)	(-2.68)	(-2.78)	(-2.78)
Cons	-1.0175*	-0.8560	-0.9033	-0.7865	-0.5407	-0.6311	-9.2031***	-8.8733***	-8.9118***
	(-1.67)	(-1.41)	(-1.48)	(-1.00)	(-0.69)	(-0.80)	(-5.35)	(-5.16)	(-5.19)
	4.Dismissal			***5.Contract expiration***			***6.Corporate governance reform***		
	(1)	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**	**(1)**	**(2)**	**(3)**
	ROA	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**	**ROA**	**ROE**	**ROS**
$PERF_{it-1}$	-7.1512***	-1.3659*	-1.0018***	-6.0945***	-1.4849***	-0.8111***	9.0377	1.4910	0.0311

	(-2.88)	(-1.66)	(-2.89)	(-4.95)	(-4.44)	(-4.01)	(1.49)	(0.72)	(0.04)
$SIZE_{it}$	-0.1815*	-0.2065**	-0.1872*	-0.1048**	-0.1072**	-0.1066**	-0.0835	-0.0709	-0.0573
	(-1.72)	(-1.97)	(-1.75)	(-2.30)	(-2.35)	(-2.34)	(-0.70)	(-0.59)	(-0.48)
LEV_{it}	-0.0681	-0.0593	-0.0646	-0.0312	-0.0498	-0.0174	-0.0667	-0.0977	-0.1080
	(-0.94)	(-0.78)	(-0.87)	(-0.92)	(-1.42)	(-0.52)	(-0.54)	(-0.78)	(-0.84)
AGE_{it}	0.0068	0.0082	0.0086	0.0326***	0.0328***	0.0321***	0.0088	0.0047	0.0044
	(0.30)	(0.37)	(0.38)	(3.48)	(3.49)	(3.43)	(0.37)	(0.20)	(0.19)
$TENURE_{it}$	-0.4590***	-0.4825***	-0.4671***	-0.0658**	-0.0703**	-0.0690**	-0.2605***	-0.2498***	-0.2537***
	(-4.57)	(-4.78)	(-4.64)	(-2.22)	(-2.38)	(-2.34)	(-2.88)	(-2.81)	(-2.81)
$BOARDSIZE_{it}$	-0.0883	-0.0909	-0.0867	-0.0539*	-0.0518*	-0.0541*	-0.2039***	-0.2040***	-0.2034***
	(-1.29)	(-1.34)	(-1.26)	(-1.87)	(-1.80)	(-1.88)	(-2.62)	(-2.63)	(-2.61)
$INDEPENDENT_{it}$	5.5786***	5.2052***	5.4582***	2.0756**	2.0263**	1.9915**	-0.0341	0.1878	0.1862
	(3.13)	(2.89)	(3.04)	(2.44)	(2.37)	(2.33)	(-0.02)	(0.10)	(0.10)
$TOPONE_{it}$	7.6647	5.8219	7.0166	1.2306	0.9393	0.8907	-8.7996*	-8.7017*	-9.0055*
	(1.31)	(1.01)	(1.20)	(0.56)	(0.43)	(0.41)	(-1.67)	(-1.67)	(-1.72)
$TOPONE2_{it}$	-6.8779	-5.1318	-6.3351	0.0263	0.2776	0.3353	6.9277	7.0523	7.2261
	(-1.16)	(-0.88)	(-1.07)	(0.01)	(0.12)	(0.15)	(1.24)	(1.28)	(1.31)
$TOP4\_1_{it}$	0.2755	0.2222	0.2481	0.3395**	0.3328*	0.3260*	-0.4635	-0.4465	-0.4769
	(0.62)	(0.51)	(0.55)	(1.97)	(1.93)	(1.89)	(-1.12)	(-1.08)	(-1.16)
$COMPENSATION_{it}$	99.3448	79.0491	83.8365	28.7206	15.7708	13.8484	85.1234	101.1099	108.5970
	(1.02)	(0.82)	(0.87)	(0.65)	(0.36)	(0.32)	(0.86)	(1.03)	(1.11)
$DUALITY_{it}$	-0.1499	-0.0823	-0.2393	-0.1166	-0.1155	-0.0938	-1.7721*	-1.7925*	-1.8983*
	(-0.33)	(-0.18)	(-0.51)	(-0.58)	(-0.57)	(-0.47)	(-1.73)	(-1.76)	(-1.84)
$PERF_{it-1} * SOELG_{it}$	0.6960	-0.3001	-0.1426	2.5700	0.5144	0.1040	-7.8873	-1.1222	-0.0336
	(0.24)	(-0.35)	(-0.38)	(1.32)	(0.98)	(0.33)	(-1.30)	(-0.48)	(-0.03)
$PERF_{it-1} * SOECG_{it}$	4.0329	1.0000	1.2815	2.5886	0.1960	0.2169	10.1030	2.3624	3.9458

	(0.71)	(0.43)	(0.59)	(1.02)	(0.25)	(0.37)	(1.04)	(1.26)	(1.56)
$PERF_{it-1} * SAMBLG_{it}$	-2.4096	0.0237	-0.3889*	2.1663	0.0528	0.2555	-6.4808	-1.3733	1.4966
	(-0.94)	(0.02)	(-1.74)	(1.24)	(0.12)	(0.85)	(-0.91)	(-0.58)	(0.72)
$PERF_{it-1} * SAMBCG_{it}$	5.7496	0.6582	0.3047	13.4769**	2.3192*	2.8775	-7.9495	-1.1306	0.0435
	(0.34)	(0.18)	(0.05)	(2.54)	(1.73)	(1.61)	(-0.00)	(-0.00)	(0.00)
$SOELG_{it}$	0.3764	0.2926	0.3851	-0.3057*	-0.3375*	-0.3250*	-0.3337	-0.3934	-0.4016
	(0.82)	(0.66)	(0.85)	(-1.69)	(-1.88)	(-1.82)	(-0.75)	(-0.89)	(-0.92)
$SOECG_{it}$	0.3754	0.3111	0.3835	-0.4245*	-0.4736**	-0.4430*	-0.1962	0.0028	-0.0643
	(0.66)	(0.56)	(0.69)	(-1.84)	(-2.04)	(-1.92)	(-0.32)	(0.01)	(-0.11)
$SAMBLG_{it}$	0.2303	0.3903	0.3189	-0.3628**	-0.4006**	-0.3631**	-0.2909	-0.3644	-0.3771
	(0.53)	(0.94)	(0.75)	(-2.14)	(-2.38)	(-2.18)	(-0.64)	(-0.81)	(-0.84)
$SAMBCG_{it}$	-0.9104	-0.9511	-0.9110	-0.6195*	-0.5284*	-0.5646*	-12.3558	-14.0591	-13.5674
	(-0.85)	(-0.88)	(-0.85)	(-1.93)	(-1.77)	(-1.85)	(-0.03)	(-0.02)	(-0.02)
Cons	-5.4517***	-4.7365**	-5.2758**	-3.7581***	-3.6516***	-3.6099***	0.6144	0.6689	0.6888
	(-2.63)	(-2.31)	(-2.54)	(-4.47)	(-4.36)	(-4.30)	(0.30)	(0.33)	(0.35)
Obs	6072			6072			6072		
Pseudo $-R^2$	0.0732			0.0703			0.0696		

Notes: (1) The multinomial logistic model can be thought of as simultaneously estimating binary logistics for comparisons among all alternatives; (2) Time, regional and industrial effects are controlled in all columns; (3) Z-statistics are reported in brackets; (4) * P-value≤10%, ** P-value≤5%, and *** P-value≤1%.

REFERENCES

Abe,Y. (1997) Chief executive turnover and firm performance in Japan. *Journal of the Japanese and International Economies,* 11, pp.2-26.

Admati, R.A., Pfleiderer, P. and Zechner, J.,(1994) Large shareholder activism, risk sharing, and financial market equilibrium. *Journal of Political Economy*, 102, pp.1097-1130.

Allen, F., Qian, J. and Qian, M. (2002) Law, finance, and economic growth in China. *Working Paper*, University of Pennsylvania.

Allgood,S. and Farrell,K.A.(2000) The effect of CEO tenure on the relation between firm performance and turnover. *Journal of Financial Research*,23, pp.373-390.

Almeida, H., Campello, M. and Wiesbach, M. (2004) The cash flow sensitivity of cash. *Journal of Finance*, 59, pp.1777-1804.

Anderson, R.C., Mansi, S.A. and Reeb, D.M. (2004) Board characteristics, accounting report integrity, and the cost of debt. *Journal of Accounting and Economics*, 37, pp.315-342.

Ang, J.S., Cole, R.A. and Lin, J.W. (2000) Agency costs and ownership structure. *Journal of Finance,* 55, pp.81-106.

Arellano, M. and Bond S. R. (1991) Some tests of specification for panel data:Monte Carlo evidence and an application to employment equations. *Review of Economic Studies*, 58, pp.277-297.

Arellano, M. and Bover, O. (1995) Another look at the instrumental-variable estimation of error-components models. *Journal of Econometrics*, 68, pp.29-52.

Bae, K.H., Kang, J.K., and Kim, J.M. (2002) Tunnelling or value added? Evidence from mergers by Korean business groups. *Journal of Finance,* 57, pp.2695-2740.

Bai, C.E., Liu,Q., Lu, J., Song, F.M. and Zhang, J. (2004) Corporate governance and market valuation in China. *Journal of Comparative Economics,* 32, pp.599-616.

Baliga, B.R., Moyer, R.C. and Rao, R.S. (1996) CEO duality and firm performance: what's the fuss? *Strategic Management Journal*, 17, pp.41-43.

Barclay, M.J. and Holderness, C. G. (1991) Negotiated block trades and corporate control. *Journal of Finance,* 46, pp.861-878.

Bebchuk, LA. and Roe, M.J. (1999) A theory of path dependence in corporate ownership and governance. *Stanford Law Review*, 52, pp.127-170.

Becher, B., Cronqvist,H. and Fahlenbrach,R.(2008) Estimating the effects of large shareholders using a geographic instrument. *Working Paper.*

Bennedsen, M. and Wolfenzon, D. (2000) The balance of power in closely held corporations. *Journal of Financial Economics*, 58, pp. 113-139.

Berglof,E. and Perotti,E.(1994) The governance structure of the Japanese financial keiretsu. *Journal of Financial Economics*, 36, pp.259-284.

Berle, A. and Means, G. (1932) The modern corporation and private property. New York: MacMillan.

Berlin, J. and Loeys, J. (1988) Bond covenants and delegated monitoring. *Journal of Finance*, 43, pp.397-412.

Berry, T.K., Lemmon, M.L., Bizjak, J.M. and Naveen, L. (2000) CEO turnover and firm diversification. *Working Paper.*

Bertrand, M., Mehta, P. and Mullainathan, S. (2000) Ferreting out tunnelling: An application to Indian business Groups. *Quarterly Journal of Economics,* 117, pp.121-148.

Bethel, J.E., Leibeskind, J.P. and Opler, T. (1998) Block share purchases and corporate performance. *Journal of Finance,* 53, pp.605-634.

Biais, B. and Perotti, E. (2002) Machiavellian privatisation. *American Economic Review,* 92, pp.240-258.

Bloch, F. and Hege, U. (2001) Multiple shareholders and control contests. *Working Paper*, University of Aix-Marseille and GREQAM, France.

Blundell, R. and Bond. S. (1998) Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87, pp.115-143.

Bolton, P. (1995) Privatisation and the separation of ownership and control: lessons from Chinese enterprise reform. *Economics of Transition*, 3, pp.1-12.

Bolton, P. and Thadden, V. (1998) Blocks, liquidity, and corporate control. *Journal of Finance,* 53, pp.1-25.

Bond, S., Hoeffler, A. and Temple, J. (2001) GMM estimation of empirical growth models. *Working Paper.*

Borokhovich, K.A., Parrino, R. and Trapani, T. (1996) Outside directors and CEO selection *Journal of Financial and Quantitative Analysis,* 31, pp.337-355.

Boubakri, N. and Cosset, J.C. (1998) The financial and operating performance of newly privatized firms: Evidence from developing countries. *Journal of Finance*, 53, pp.1081-1110.

Boycko, M., Shleifer, A. and Vishny, R.W. (1996) A theory of privatization. *The Economic Journal*, 106, pp.309-319.

Bozec.Y. and Laurin.C. (2008) Large shareholder entrenchment and performance: empirical evidence from Canada. *Journal of Business Finance and Accounting,* 35, pp.25-49.

Brada, J.C. (1996) Privatization is transition-or is it? *Journal of Economic Perspectives*, 10, pp.67-86.

Brandt, L. and Li, H. (2003) Bank discrimination in transition economies: ideology, information, or incentives? *Journal of Comparative Economics,* 31, pp.387-413.

Brickley, J.A., Coles, J.L. and Terry, R.L. (1994) Outside directors and the adoption of poison pills. *Journal of Financial Economics,* 35, pp. 371-390.

Buckley, P.J., Clegg, J. and Wang, C.Q. (2002) The impact of inward FDI on the performance of Chinese manufacturing firms. *Journal of International Business Studies*, 33, pp.637-655.

Cao, L. (2000) Chinese privatization: between plan and market. *Law and Contemporary Problems*, 63, pp.13-62.

Cao, Y.Z., Qian, Y.Y. and Weingast, B.R. (1999) From federalism, Chinese style to privatization, Chinese style. *Economics of Transition*, 7, pp.103-131.

Chan, A. and Unger, J. (2009) A Chinese state enterprise under the reforms: what model of capitalism? *The China Journal*, 62, pp.1-26.

Chang, E.C. and Wong, S.M.L. (2009) Governance with multiple objectives: Evidence from top executive turnover in China. *Journal of corporate finance,* 15, pp.230-244.

Chen, B., Dietrich, J.K. and Feng, Y. (2000) Financial market reform in China: progress, problems, and prospects. Boulder:Westview Press.

Chen, C., Chang, L. and Zhang,Y.M. (1995) The role of foreign direct investment in China's post-1978 economic development. *World Development,* 23, pp.691-703.

Chen, D., Fan, J.P.H. and Wong, T.J. (2002) Do politicians jeopardize professionalism? Decentralization and the structure of Chinese corporate boards. *Working Paper*, Shanghai University of Finance and Economics, China.

Chen, G.M., Firth, M. and Rui,O.M. (2006) Have China's enterprise reforms led to improved efficiency and profitability? *Emerging Markets Review*, 7, pp.82-109.

Chen, G.M., Firth, M. and Xu, L.P. (2009) Does the type of ownership control matter? Evidence from China's listed companies. *Journal of Banking and Finance,* 33, pp.171-181.

Chen, J. (2001) Ownership structure as corporate governance mechanism: evidence from Chinese listed companies. *Economics of Planning,* 34, pp.53–72.

Chen, K.C.W. and Yuan, H. (2004) Earnings management and capital resource allocation: evidence from China's accounting based regulation of rights issues. *The Accounting Review,* 79, pp.645–665.

Chen, X.Y., Kim, J.B., Wang, S.S. and Xu, X.D. (2007) Firm performance and the ownership of the largest shareholder. *Corporate Ownership and Control,* 4, pp.126-138.

Cheung, Y.L., Jiang, P., Limpaphayom, P. and Lu,T. (2008) Does corporate governance matter in China? *China Economic Review,* 19, pp.460-479.

Chi, W. and Wang, Y. (2009) Ownership, performance and executive turnover in China. *Journal of Asian Economics,* 20, pp.465-478.

China State Statistical Bureau, various years. China Statistical Yearbook. China Statistical Publishing House, Sanlihe, Beijing.

Chiu, C.L., Lee, M. and Chen, C.D. (2005) Removal of an investment restriction: the 'B' share experience from China's stock markets. *Applied Financial Economics,* 15, pp.273–285.

Chung, R., Firth, M. and Kim, J.B. (2002) Institutional monitoring and opportunistic earnings management. *Journal of Corporate Finance,* 8, pp.29–48.

Claessens, S. and Djankov, S. (1999) Enterprise performance and management turnover in the Czech Republic. *European Economic Review,* 43, pp.1115–1124.

Claessens, S., Djankov, S. and Lang, L.H.P. (2000) The separation of ownership and control in East Asian corporations. *Journal of Financial Economics,* 58, pp.81–112.

Claessens, S., Djankov, S., Fan, J. and Lang, L.H.P. (2002) Disentangling the incentive and entrenchment effects of large shareholdings. *Journal of Finance,* 57, pp.2741-2772.

Clarke, D.C. (2003) Corporate governance in China: an overview. *China Economic Review,* 14, pp.494-507.

Coffee, J. (1999) The future as history: The prospects for global convergence in corporate governance and its implications. *Northwestern Law Review,* 93, pp.641-707.

Coffee, J. (2002) Racing to the top? The impact of cross-listings and stock-market competition on corporate governance. *Columbia Law Review,* 102, pp.1757–1831.

Comment, R. and Jarrell, G.A. (1995) Corporate focus and stock returns. *Journal of*

Financial Economics, 37, pp.67-87.

Cotter, J., Shivdasani, A. and Zenner, M. (1997) Do independent directors enhance target shareholder wealth during tender offers? *Journal of Financial Economics,* 43, pp.195-218.

Dahya, J., Lonie, A.A. and Power, D.M. (1998) Ownership structure, firm performance and top executive change: an analysis of UK firms. *Journal of Business Finance and Accounting,* 25, pp.1089-1118.

Dahya, J., Mcconnell, J.J. and Travlos, N.G. (2002) The Cadbury committee, corporate performance, and top management turnover. *Journal of Finance,* 57, pp.461-683.

Dalton,D.R. and Kesner,I.F. (1983) Inside/outside succession and organizational size: the pragmatics of executive replacement. *Academy of Management Journal*,26,pp.736-742.

Davis, G.F. (1991) Agents without principles? The spread of the poison pill through the intercorporate network. *Administrative Science Quarterly*, 39, pp.583-613.

DeAngelo, H. and Rice, E.M. (1983) Antitakeover amendments and stockholder wealth. *Journal of Financial Economics,* 11, pp.329-360.

DeFond, M. and Park, C. (1999) The effect of competition on CEO turnover. *Journal of Accounting and Economics,* 27, pp.35-56.

Defond, M.L. and Hung, M. (2004) Investor protection and corporate governance: evidence from worldwide CEO turnover. *Journal of Accounting Research,* 9, pp.415-431.

Demsetz, H. and Lehn, K. (1985) The structure of corporate ownership: Causes and consequences. *Journal of Political Economy,* 93, pp.1155-1177.

Demsetz, H. and Villalonga, B. (2001) Ownership structure and corporate performance *Journal of Corporate Finance*, 7, pp.209-233.

Demurger, S., Sachs, J.D., Woo, W.T., Bao, S., Chang, G. and Mellinger,A. (2002) Geography, economic policy, and regional development in China. *Working Paper*, Cambridge, MA.

Denis, D. J., Denis, D.K. and Sarin, A.(1997) Ownership structure and top executive turnover, *Journal of Financial Economics,* 45, pp.193-221.

Denis, D.J. and Denis, D.K. (1995) Performance changes following top management dismissals. *Journal of Finance*, 50, pp.1029-1157.

Denis, D.J. and Kruse, T.A. (2000) Managerial discipline and corporate restructuring following performance declines. *Journal of Financial Economics*, 55,

pp.391-424.

Denis, D. J. and Sarin, A. (1999) Ownership and board structures in publicly traded corporations. *Journal of Financial Economics*, 52,pp.187-223.

Denis, D.J. and Sibilkov, V. (2010) Financial constraints, investment, and the value of cash holdings. *Review of Financial Studies*, 23, 247-269.

Denis, D.K. (2001) Twenty-five years of corporate governance research...and counting, *Review of Financial Economics*, 10, pp.191-212.

Denis, D.K. and McConnell,J.J. (2003) International corporate governance. *Journal of Financial and Quantitative Analysis*,38,pp.1-36.

Dhillon,A. and Rossetto,S. (2009) Corporate control and multiple large shareholders. *Working paper*.

Diamond, D.W. (1984) Financial intermediation and delegated monitoring. *Review of Economics Studies*, 51, pp.393-414.

Diamond, D.W. (1991) Debt maturity structure and liquidity risk. *Quarterly Journal of Economics*, 106, pp.709-737.

Ding,Y., Zhang, H. and Zhang, J. (2007) Private Vs. state ownership and earnings management: evidence from Chinese listed companies. *Corporate Governance: An International Review*, 15, pp. 223-235.

Dittmar, A. and Mahrt-Smith, J. (2007) Corporate governance and the value of cash holdings. *Journal of Financial Economics*, 83, 599–634.

Dittmar, A., Mahrt-Smith, J. and Servaes, H. (2003) International corporate governance and corporate cash holdings. *Journal of Financial and Quantitative Analysis*, 38, pp.111–133.

Djankov, S. and Murrell, P. (2002) Enterprise restructuring in transition: a quantitative survey. *Journal of Economic Literature*, 40, pp.739–792.

Doidge, C., Karolyi, G.A. and Stulz, R.M. (2004) Why are foreign firms listed in U.S. worth more? *Journal of Financial Economics,* 71, pp.205-238.

Estrin, S. and Perotin, V. (1991) Does ownership always matter? *International Journal of Industrial Organization*, 9, pp.55-72.

Estrin, S. and Wright, M. (1999) Corporate governance in the former Soviet Union: an overview. *Journal of Comparative Economics*, 27, pp 398-421.

Faccio, M. and Lang, L.H.P. (2002) The ultimate ownership of western European companies. *Journal of Financial Economics,* 65, pp.365-395.

Faccio, M., Lang, L.H.P. and Young, L. (2001) Dividends and expropriations. *American Economic Review,* 91, pp.54-79.

Fama, E, F. (1980) Agency problems and the theory of the firm. *Journal of Political Economy,* 88, pp.288-305.

Fama, E, F. (1985) What's different about banks? *Journal of Monetary Economics,* 15, pp.29-39.

Fama, E.F. and Jensen, M.C. (1983a) Separation of ownership and control. *Journal of Law and Economics,* 24, pp.301-325.

Fama, E.F and Jensen, M.C. (1983b) Agency problems and residuals claims. *Journal of Law and Economics,* 26, pp.327-349.

Fan, C.C. (1997) Uneven development and beyond: regional development theory in post-Mao China. *International Journal of Urban and Regional Research,* 21, pp.620-639.

Fan, D.K.K., Lau, C.M. and Young, M. (2007) Is China's corporate governance beginning to come of age? The case of CEO turnover. *Pacific-Basin Finance Journal,* 15, pp.105-120.

Fan, J.P.H., Wong, T.J. and Zhang, T.Y. (2007) Politically connected CEOs, corporate governance, and post-IPO performance of China's newly partially privatized firms. *Journal of Financial Economics,* 84, pp.330-357.

Farrell, K.A. and Whidbee, D.A (2003) The impact of firm performance expectations on CEO turnover and replacement decisions. *Journal of Accounting and Economics,* 36, pp.165-196.

Faulkender, M. and Wang, R. (2006) Corporate financial policy and the value of cash. *Journal of Finance,* 61, pp.1957-1990.

Ferreira,M.A. and Vilela, A.S. (2004) Why do firms hold cash? Evidence from EMU countries. *European Financial Management,* 10, pp.295-319.

Finkelstein, S. and D'Aveni, R.A. (1994) CEO duality as a double-edged sword: how boards of directors balance entrenchment avoidance and unity of command. *Academy of Management Journal,* 37, pp.1079–1108.

Firth, M., Fung, P.M.Y. and Rui, O.M. (2006a) Firm performance, governance structure, and top management turnover in a transitional economy. *Journal of Management studies,* 43, pp.1289-1330.

Firth, M., Fung, P.M.Y. and Rui, O.M. (2006b) Corporate performance and CEO compensation in China. *Journal of Corporate Finance,* 12, pp.693-714.

Firth, M., Fung, P.M.Y. and Rui, O.M. (2008) Ownership, governance mechanisms

and agency costs in China's listed firms. *Journal of Asset Management*, 9, pp.90-101.

Fizel, J.L. and Louie, K.K.T. (1990) CEO retention, firm performance and corporate governance. *Managerial and Decision Economics*, 11, pp.167-176.

Foley, F., Hartzell, J., Titman, S. and Twite, G. (2007) Why do firms hold so much cash? A tax-based explanation. *Journal of Financial Economics*, 86, pp. 579-607.

Franks, J. and Mayer, C. (1996) Hostile takeovers and the correction of managerial failure. *Journal of Financial Economics*,40, pp.163-181.

Franks, J. and Mayer, C. (2001) Ownership and control of German corporations. *Review of Financial Studies*, 14, pp.943–977.

Fresard, L. (2008) Financial strength and product market performance: the real effects of corporate cash holdings. *Working paper.*

Fung, H., Donald, K. and Shen, J. (2006) China's privatization reforms: progress and challenges. *The Chinese Economy*, 39(2), pp.5-25.

Gao, S. (2010) Privatization, soft budget constraint, and social burdens: a random-effects stochastic frontier analysis on Chinese manufacturing technical efficiency. *Working Paper.*

Garcia-Herrero, A., Gavila, S. and Santabarbara, D. (2006) China's banking reform: an assessment of its evolution and possible impact. *CESifo Economic Studies*, 52(2), pp.304-363.

Geroski, P., Machin, S. and Reenen, J.V. (1993) The profitability of innovative firms. *The Rand Journal of Economics*, 24, pp.198-211.

Gianfrate. G. (2007) What do shareholders' coalitions really want? Evidence from Italian voting trusts. *Corporate Governance: An International Review*, 15, pp.122-132.

Gibbons, J. and Kulkarni, K.G. (2011) An analysis of China's economic reform using the neo-classical model of international trade. *Journal of Emerging Knowledge on Emerging Markets*, 3, pp.82-104.

Gillan, S.L. and Starks, L.T. (1998) A survey of shareholder activism: motivation and empirical evidence. *Contemporary Finance Digest*, 2(3), pp. 10-34.

Gillan, S.L. and Starks, L.T. (2000) Corporate governance proposals and shareholder activism: the role of institutional investors. *Journal of Financial Economics*, 57, pp.275-305.

Gilson, R.J. (2000) Globalizing corporate governance: Convergence of form or function. *Working Paper*, Stanford University, Stanford, MA.

Gilson, S.C. (1990) Bankruptcy, boards, banks and block holders: Evidence on changes in corporate ownership and control when firms default. *Journal of Financial Economics*, 27, pp.355-387.

Gilson, S.C. and Vetsuypens, M.R. (1993) CEO compensation in financially distressed firms: An empirical analysis. *Journal of Finance,* 48, pp.425-458.

Glaeser, E., Johnson, S. and Shleifer, A. (2001) Coase versus the coasians. *Quarterly Journal of Economics* 116, pp.853-899.

Gomes, A. and Novaes, W. (2001) Sharing of control as a corporate governance mechanism. *PIER Working Paper*, University of Pennsylvania Law School.

Gorton, G. and Schmid, F.A. (1996) Universal banking and the performance of German firms. *Working Paper*, NBER, Cambridge, MA.

Goyal, V.K. and Park, C.W. (2002)Board leadership structure and CEO turnover. *Journal of Corporate Finance*, 8, pp.49-66.

Gregory-Smith, I., Thompson, S. and Wright,P.W. (2009) Fired or retired? A competing risks analysis of chief executive turnover. *The Economic Journal*, 119, pp.463-481.

Grossman, S.J. and Hart. O.D. (1980) Takeover bids, the free-rider problem, and the theory of corporation. *The Bell Journal of Economics*, 11, pp.42-64.

Grossman, S.J. and Hart, O.D. (1986) The costs and benefits of ownership: A theory of vertical and lateral integration. *Journal of Political Economy*, 94, pp.691-719.

Grossman, S.J. and Hart, O.D. (1988) One-share, one-vote, and the market for corporate control. *Journal of Financial Economics*, 20, pp.175–202.

Groves, T., Hong, Y., McMillan, J. and Naughton, B. (1995) China's evolving managerial labour market. *Journal of Political Economy*, 103, pp. 873-892.

Gul, F.A. (1999) Government share ownership, investment opportunity set and corporate policy choices in China. *Pacific Basin Finance Journal*, 7, pp.157–172.

Hanford, J., Mansi, S.A. and Maxwell, W.F. (2008) Corporate governance and firm cash holdings in the US. *Journal of Financial Economics*, 87, pp.535-555.

Harford, J. (1999) Corporate cash reserves and acquisitions. *Journal of Finance,* 54, 1969–1997.

Harris, M. and Raviv, A. (1988) Corporate control contests and capital structure. *Journal of Financial Economics,* 20, pp.321-349.

Harris, M. and Raviv, A. (1990) Capital structure and the informational role of debt.

Journal of Finance, 45, pp.321-350.

Hart, O. and Moore, J. (1990) Property rights and the nature of the firm. *Journal of Political Economy,* 98, pp.1119-1158.

Hart, O. and Moore, J. (1995) Debt and seniority: An analysis of the role of hard claims in constraining management. *American Economic Review,* 85, pp.567-585.

Haushalter, D., Klasa, S. and Maxwell, W.F. (2007) The influence of product market dynamics on a firm's cash holdings and hedging behavior? *Journal of Financial Economics*, 84(3), pp.797-825.

Hausman, J . and McFadden, D. (1984) Specification tests for the multinomial logit model. *Econometrica*, 52, pp. 1219-1240.

Haynes, M., Thompson, S. and Wright, M. (2002) The impact of divestment on firm performance: empirical evidence from a panel of UK companies. *The Journal of Industrial Economics*, 50, pp.173-196.

Helmich, D.L. (1980) Board size, variation, and rates of succession in the corporate presidency. *Journal of Business Research*, 8, pp.51–63.

Henry, P.B. (2000) Do stock market liberalizations cause investment booms? *Journal of Financial Economics,* 58, pp.301-334.

Hermalin, B.E. and Weisbach, M.S. (1988) The determinants of board composition. *The RAND Journal of Economics,* 19, pp.589-606.

Hermalin, B.E. and Weisbach, M.S. (1991) The effects of board composition and direct incentives on firm performance. *Financial Management,* 20, pp.101-112.

Hermalin, B.E. and Weisbach, M.S. (2003) Board of directors as an endogenously determined institution: A survey of the economic literature. *Economic Policy Review,* 9, pp.7-26.

Himmelberg, C.P., Hubbard, R.G. and Palia, D. (1999) Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of Financial Economics,* 53, pp. 353-384.

Holderness, C.G. (2003) A survey of blockholders and corporate control. *Economic Policy Review*, 9, pp. 51-64.

Holderness, C.G. and Sheehan, D.P. (1985) Raiders or saviors? The evidence on six controversial investors. *Journal of Financial Economics,* 14, pp.555-579.

Holderness, C. G. and Sheehan, D.P. (1988a) What constrains managers who own large blocks of stock? *Working Paper*, Managerial Economics Research Centre, University of Rochester.

Holderness, C.G. and Sheehan, D.P. (1988b) The role of majority shareholders in publicly held corporations: An exploratory analysis. *Journal of Financial Economics,* 20, pp.317- 346.

Holmstrom, B. and Kaplan, S.N. (2001) Corporate governance and merger activity in the U.S.: Making sense of the 1980's and 1990's. *Working Paper*, National Bureau of Economic Research, Cambridge, MA.

Hossain, M., Prevost, A.K. and Rao, R.P. (2001) Corporate governance in New Zealand: The effect of the 1993 Companies Act on the relation between board composition an firm performance. *Pacific-Basin Finance Journal,* 9, pp.119-145.

Hou, J.W. (2011) Economic reform of China: cause and effects. *The Social Science Journal*, 48, pp.419-434

Hovey, M., Li, L. and Naughton, T. (2003) The relationship between valuation and ownership of listed firms in China. *Corporate Governance: An International Review*, 11, pp. 112–120.

Hovey, M. (2005) Corporate governance in China: an analysis of ownership changes after the 1997 announcement. *Working Paper.*

Hovey, M. (2006) Corporate governance in China: an empirical study of the ownership structures of listed firms. *Working Paper.*

Hovey, M. and Naughton. T. (2007) A survey of enterprise reforms in China: the way forward. *Economic Systems,* 31, pp.138-156.

Hu, X. (2000) The state, enterprises, and society in post-Deng China: impact of the new round of SOE reform. *Asian Survey,* 40, pp.641–657.

Huang, G. and Song, F,M. (2006) The determinants of capital structure: evidence from China. *China Economic Review*, 17, pp.14-36.

Huson, M.R., Parrino, R. and Starks, L.T. (2001) Internal monitoring mechanisms and CEO turnover: a long-term perspective. *Journal of Finance*, 6, pp.2265-2297.

James, C. (1987) Some evidence on the uniqueness of bank loans. *Journal of Financial Economics*, 19, pp.217-235.

Jarrell, G. A. and Poulsen, A.B. (1987) Shark repellents and stock prices: the effects of antitakeover amendments since 1980. *Journal of Financial Economics,* 19, pp.127-168.

Jefferson, G.H. and Rawski, T.G. (1994) Enterprise reform in Chinese industry. *The Journal of Economic Perspective*, 8(2), pp.47-70.

Jefferson, G.H. and Singh, I. (1999) Enterprise reform in China: ownership, transition, and performance. The World Bank: Oxford University Press.

Jefferson, G.H. and Su, J. (2006) Privatization and restructuring in China: evidence from shareholding ownership, 1995-2001. *Journal of Comparative Economics*, 34, pp146-166.

Jensen, M.C. (1986) Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review,*76, pp.323-329.

Jensen, M.C. (1988) Takeovers: their causes and consequences. *Journal of Economic Perspectives,* 2, pp.21-48.

Jensen, M.C. (1989) Eclipse of the public corporation. *Harvard Business Review,* 67, pp.60-70.

Jensen, M.C. (1993) The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance,* 48, pp.831-880.

Jensen, M.C. and Meckling, W.H. (1976) Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics,* 3, pp.305-360.

Jensen, M.C. and Murphy, K.J. (1990) Performance pay and top management incentives. *Journal of Political Economy*, 98, pp.225-263.

Jensen, M.C. and Ruback, R.S. (1983) The market for corporate control: The scientific evidence. *Journal of Financial Economics*, 11, pp.5-50.

Ji, Y. (1998) China's Enterprise Reform: changing state/society relations after Mao. Routledge Studies in China in Transition, Chippeham,Wiltshire: Antony Rowe, Ltd.

Jiang,G.H. and Wang,H.S.(2008) Should earnings thresholds be used as delisting criteria in stock market, *Journal of Accounting and Public Policy*, 27, pp.409-419.

John, T.A. (1993) Accounting measures of corporate liquidity, leverage, and costs of financial distress. Financial Management 22, 91-100.

Johnson, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2000) Tunnelling. *American Economic Review*, 90, pp. 22-27.

Jones, S.L., Megginson, W.L., Nash, R.C. and Netter, J.M. (1999) Share issue privatizations as financial means to political and economic ends. *Journal of Financial Economics*, 53,pp. 217–253.

Kalcheva,I. and Lins,K.V. (2007) International evidence on cash holdings and expected managerial agency problems.The Review of Financial Studies,20,pp.1087-1112.

Kang, J.K. and Shivdasani, A. (1995) Firm performance, corporate governance, and top executive turnover in Japan. *Journal of Financial Economics*, 38, pp. 29-58.

Kaplan, S.N. (1994) Top executive rewards and firm performance: a comparison of Japan and the U.S. *Journal of Political Economy*, 102, pp.510-546.

Kaplan, S.N. and Minton, B.A. (1994) Appointments of outsiders to Japanese boards: determinants and implications for managers *Journal of Financial Economics,* 36, pp.225-257.

Kato, T. and Long, C. (2006) CEO turnover, firm performance, and enterprise reform in China: evidence from micro data. *Journal of Comparative Economics*, 34, pp.796-817.

Keynes, J. M. (1936) The general theory of employment, interest, and money. London: Macmillan.

Kim, C.S., Mauer, D.C. and Sherman, A.E. (1998) The determinants of corporate liquidity: theory and evidence. *Journal of Financial and Quantitative Analysis*, 33, pp.335-360.

Klein, A. (1998) Firm performance and board committee structure. *Journal of Law and Economics*, 41, pp.275-299.

Krueger, A.O. (1990) Government failures in development. *Journal of Economic Perspectives*, 4, pp.9– 23.

La Porta, R. and López-de-Silanes, F. (1999) The benefits of privatization: evidence from Mexico. *Quarterly Journal of Economics*, 114(4), pp.1193-1242.

La Porta, R., Lopez-De-Silanes, F. and Shleifer, A. (1999) Corporate ownership around the world. *Journal of Finance,* 54, pp.471-517.

La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2002a) Government ownership of banks. *Journal of Finance,* 57, pp.265-301.

La Porta, R., Lopez-De-Silanes, F. and Zamarripa, G. (2003) Related lending. *Quarterly Journal of Economics*, 118, pp.231-268.

La Porta, R., Lopez-De-Silanes, F. Shleifer, A. and Vishny, R.W. (1997) Legal determinants of external finance. *Journal of Finance,* 52, pp.1131-1150.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A. and Vishny, R.W. (1998) Law and finance. *Journal of Political Economy,* 106, pp.1113-1155.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W. (2000a) Agency problems and dividend policies around the world. *Journal of Finance*, 55, pp.1-33.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A. and Vishny, R.W. (2000b) Investor protection and corporate governance. *Journal of Financial Economics,* 58, pp.3-27.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R.W. (2002b) Investor

protection and corporate valuation. *The Journal of Finance,* 57, pp.1147-1170.

Lang, L.H.P and Stulz, R.M. (1994) Tobin's Q, corporate diversification, and firm performance. *Journal of Political Economy,* 102, pp.1248-1280.

Lang, L.H.P., Ofek, E. and Stulz, R.M. (1996) Leverage, investment, and firm growth. *Journal of Financial Economics* 40, pp.3-30.

Lang, L.H.P., Stulz, R.M. and Walking, R.A. (1991) A test of the free cash flow hypothesis: The case of bidder returns. *Journal of Financial Economics,* 29, pp.315-336.

Lang, M.H., Lins, K.V., Miller, D.P. and Leuz, C. (2003) ADRs, analysts, and accuracy: does cross listing in the United States improve a firm's information environment and increase market value? *Journal of Accounting Research,* 41, pp.317–362.

Laux, V. (2008) Board independence and CEO turnover. *Journal of Accounting Research*, 46. pp.137-171.

Lee. J. (1994) Regional differences in the impact of the open door policy on income growth in China. *Journal of Economic Development*, 19, pp.215-234.

Lehmann,E. and Weigand,J. (2000) Does the governed corporation perform better? governance structures and corporate performance in Germany. *European Finance Review*, 4, pp.157-195.

Leker, J. and Salomo, S. (2000) CEO turnover and corporate performance. *Scandinavian Journal of Management*, 16, pp.287-303.

Li, D.D. (1996) A theory of ambiguous property rights in transition economies: the case of the Chinese non-state sector. *Journal of Comparative Economics*, 23(1), pp.1-19.

Li. H.B., Meng, L.S., Wang, Q. and Zhou, L. (2008) Political connections, financing and firm performance: evidence form Chinese private firms. *Journal of Development Economics,* 87, pp.283-299.

Li, K., Wang, T., Cheung, Y.L. and Jiang, P. (2011) Privatisation and risk sharing: evidence from the split share structure reform in China. *Review of Financial Studies*, 24(7), pp.2499-2525.

Li, L., Naughton, T. and Hovey, M. (2008) A review of corporate governance in China. *Working Paper.*

Li, S.M., Li, S.H. and Zhang, W.Y. (1999) Cross-regional competition and privatisation in China. *MOCT-MOST: Economic Policy in Transitional Economies*, 9(1), pp.75-88.

Li, W. (1997) The impact of economic reform on the performance of Chinese state enterprises, 1980-1989. *Journal of Political Economy,* 105, pp.1080-1106.

Liao, G., Chen, X., Jing, X. and Sun, J. (2009) Policy burdens, firm performance, and management turnover, *China Economic Review*, 20, pp.15-28.

Lin, C. (2001) Corporatisation and corporate governance in China's economic transition. *Economics of Planning*, 34(1), pp.5-35.

Lin, C.R. (2001) Corporatization and corporate governance in China's economic transition. *Economics of Planning*, 34, pp.5–35.

Lin, X. and Zhang, Y. (2009) Bank ownership reform and bank performance in China. *Journal of Banking and Finance*, 33, pp.20-29.

Lin, Y. and Zhu, T. (2001) Ownership restructuring in Chinese state industry: an analysis of evidence on initial organizational changes. *The China Quarterly*, 166, pp.305–341.

Lins, K.V. (2003) Equity ownership and firm value in emerging markets. *Journal of Financial and Quantitative Analysis*, 38, pp.159–184.

Lins, K.V., Servaes, H. and Tafano, P. (2008) What drives corporate liquidity? An international survey of cash holdings and lines of credit. *Working Paper.* University of Utah.

Liu, G.S., Sun, P. and Woo, W.T. (2006) The political economy of Chinese-style privatization: sotives and constraints. *World Development*, 34, pp.2016-2033.

Liu, L.S. (2001) Chinese characteristics compared: a legal and policy perspective of corporate finance, and governance in Taiwan and China. *Working Paper*, National Taiwan University.

MacNeil, I. (2002) Adaptation and convergence in corporate governance: The case of Chinese listed companies. *Working Paper*, University of Aberdeen.

Malatesta, P.H. and Walking, R.A. (1988) Poison pill securities: stockholder wealth, profitability, and ownership structure *Journal of Financial Economics,* 20, pp.347-376.

Martin, K.J. and McConnell, J.J. (1991) Corporate performance, corporate takeovers, and management turnover. *Journal of Finance*, 46, pp.671-687.

Maury, B. and Pajuste,A. (2005) Multiple large shareholders and firm value. *Journal of Banking and Finance*, 29, pp.1813-1834.

McConnell, J.J. and Servaes, H. (1990) Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, 27, pp.595-612.

McLean, D., Zhang, T. and Zhao, M. (2012) Why does the Law Matter? Investor Protection and its Effects on Investment, Finance, and Growth. *Journal of Finance*, 67, pp. 313-50.

Megginson, W.L., Nash, R.C. and Van Randenborgh, M. (1994) The financial and operating performance of newly privatized firms: an international empirical analysis. *Journal of Finance*, 49, pp.403– 452.

Megginson, W.L. and Netter, J.M. (2001) From state to market: a survey of empirical studies on privatization. *Journal of Economic Literature*, 39, pp.321-389.

Mikkelson, W.H. and Partch, M.M. (2003) Do persistent large cash reserves hinder performance? *Journal of Financial and Quantitative Analysis*, 38, pp.275–294.

Modigliani, F. and Miller, M.H. (1958) The cost of capital, corporation finance and the theory of investment. *American Economic Review*, 48, pp. 261-297.

Moffett, M.H., Stonehill, A.I. and Eiteman, D.K. (2003) Fundamentals of multinational finance. Boston: Addison-Wesley.

Morck, R., Shleifer, A. and Vishny, R.W. (1988) Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics,* 20, pp.293-315.

Morck, R., Shleifer, A. and Vishny, R.W. (1989) Alternative mechanisms of corporate control. *American Economic Review* 79, pp.842-852.

Morck, R., Shleifer, A. and Vishny, R.W. (1990) Do managerial objectives drive bad acquisitions? *Journal of Finance,* 45, pp.31-48.

Morris, J., Hassard, J. and Sheehan, J. (2002) Privatisation, Chinese style: economic reform and the state-owned enterprises. *Public Administration*, 80, pp.359-373.

Myers, S.C. (1977) Determinants of corporate borrowing. *Journal of Financial Economics*, 5, pp.147-175.

Myers, S.C. (1984) The capital structure puzzle. *Journal of Finance*, 39, pp.575-592.

Myers, S.C. and Majluf, N.S. (1984) Corporate financing decisions when firms have investment information that investors do not. *Journal of Financial Economics*, 13, pp.187–221.

Myers, S.C. and Rajan,R.G. (1998) The paradox of liquidity. *Quarterly Journal of Economics*,113, pp.733-771.

Naughton, B (2007) The Chinese economy: transitions and growth. *The MIT Press*.

Opler, T.Z., Pinkowitz, L., Stulz, R.M. and Williamson, R. (1999) The determinants and implications of corporate cash holdings. *Journal of Financial Economics*,52, pp.3–46.

Ozkan, A. and Ozkan, N. (2004) Corporate cash holding: an empirical investigation of U.K. companies. *Journal of Banking and Finance*, 28, pp.2103-2134.

Pagano, M. and Roell, A. (1998) The choice of stock ownership structure: Agency costs, monitoring, and the decision to go public. *Quarterly Journal of Economics*, 113, pp.187-225.

Parrino, R. (1997) CEO turnover and outside succession: a cross-sectional analysis. *Journal of Financial Economics,* 46, pp.165-197.

Peng, Z.B. (2006) Firm size, ownership and wage. *Journal of Sanxi Finance and Economics University,* 28, pp.8-16.

Perotti, E.C. (1995) Credible privatisation. *American Economic Review,* 85, pp. 847-859.

Perotti, E.C., Sun, L.X. and Zou, L. (1998) State-owned versus township and village enterprises in China. *Working paper.*

Pinkowitz, L. Stulz, R.M. and Williamson, R. (2006) Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis. *Journal of finance*, 61, pp.2725-2751.

Poirier, D.J and Garber, S.G. (1974) The determinants of aerospace profit rates 1951-1971. *Southern Economic Journal*, 41, pp. 228-238

Qi, D., Wu, W. and Zhang, H. (2000) Shareholding structure and corporate performance of partially privatized firms: evidence from listed Chinese companies. *Pacific-Basin Finance Journal*, 8, pp.587-610.

Rechner, P.L. and Dalton, D.R. (1991) CEO duality and organizational performance: a longitudinal analysis. *Strategic Management Journal*, 12, pp. 155–160.

Renneboog,L. (2000) Ownership, managerial control and the governance of companies listed on the Brussels stock exchange. *Journal of Banking and Finance*, 24, pp.1959-1995.

Roodman, D. (2006) How to do Xtabond2: an introduction to 'difference' and 'system' GMM in Stata. *Working Paper.*

Ryngaert, M. (1988) The effect of poison pill securities on shareholder wealth. *Journal of Financial Economics,* 20, pp.377-417.

Sachs, J., Woo, W. and Yang, X. (2000) Economic reforms and constitutional

transition. *Working Paper*, NBER.

Saddour, K. (2006) The determinants and the value of cash holdings: evidence from French firms. *Working paper.*

Salancik, G.R. and Meindl, J.R. (1984) Corporate attributions as strategic illusions of management control. *Administrative Science Quarterly*, 29, pp.238-254.

Sappington, D.E.M. and Stiglitz, J.E. (1987) Privatization, information, and incentives. *Journal of Policy Analysis and Management,* 6, pp. 567-582.

Sarkar, J. and Sarkar, S. (2000) Large shareholder activism in corporate governance in developing countries: evidence from India. *International Review of Finance*, 1, pp.161–194.

Schipani, C. and Liu, J. (2002) Corporate governance in China: then and now. *Columbia Business Law Review*, 2002, pp.1-69.

Schmidt, K.M. (2000) The political economy of mass privatisation. *European Economic Review,* 44, pp.393-421.

Schmidt, K.M. and Schnitzer, M. (1993) Privatisation and management incentives in the transition period in Eastern Europe. *Journal of Comparative Economics,*17, pp.264-287.

Shen, W. and Cannella, A.A. (2002) Revisiting the performance consequences of CEO succession: the impacts of successor type, post succession senior executive turnover, and departing CEO tenure. *Academy of Management Journal*, 45, pp.717–733.

Shen, W. and Lin, C. (2009) Firm performance, state ownership and top management turnover at the listed firms in China: a behavioural perspective. *Corporate governance: An International Review,* 17, pp.443-456.

Shirley, M. and Nellis, J. (1991) Public enterprise reform: the lessons of experience. *The World Bank*, Washington D.C.

Shirley, M. and Walsh, P. (2000) Public vs. private ownership: the current state of the debate. *Working Paper.*

Shivdasani, A. (1993) Board composition, ownership structure, and hostile takeovers. *Journal of Accounting and Economics,*16, pp.167-198.

Shivdasani, A. and Yermack, D. (1999) CEO involvement in the selection of new board members: An empirical analysis. *Journal of Finance,* 54, pp. 1829-1854.

Shleifer, A. and Vishny, R.W. (1986) Large shareholders and corporate control. *Journal of Political Economy*, 94, pp.461-488.

Shleifer, A. and Vishny, R.W. (1988) Value maximization and the acquisition process. *Journal of Economic Perspectives,* 2, pp.7-20.

Shleifer, A. and Vishny, R.W. (1994) Politicians and firms. *Quarterly Journal of Economics*, 109, pp.995-1025.

Shleifer, A. and Vishny, R.W. (1997) A survey of corporate governance. *Journal of Finance*, 52, pp.737-783.

Singh, M. and Davidson, W.N. (2003) Agency costs, ownership structure and corporate governance mechanisms, *Journal of Banking and Finance*, 27,pp.793-816.

Smith, A. (1776) The wealth of nations. Extracts reprinted in *The Economic Nature of the Firm* (Eds: Putterman, L. and Kroszner, R.S.), pp.35-45. Cambridge: Cambridge University Press.

Smith, C.W. and Warner, J.B. (1979) On financing contracting: An analysis of bond covenants. *Journal of Financial Economics,* 7, pp.117-161.

Stulz, R.M. (1988) On takeover resistance, managerial discretion and shareholder wealth. *Journal of Financial Economics,* 20, pp.25-54.

Stulz, R.M. (1990) Managerial discretion and optimal financing policies. *Journal of Financial Economics,* 26, pp.3-27.

Sun, Q. and Tong, W.H.S. (2003) China share issue privatization: the extent of its success. *Journal of Financial Economics,* 70, pp.183–222.

Tian, L.H. and Estrin, S. (2007) Debt financing, soft budget constraints, and government ownership: evidence from China. *Economics of Transition*, 15, pp.461-481.

Tian, L.H. and Estrin, S. (2008) Retained state shareholding in Chinese PLCs: does government ownership always reduce corporate value? *Journal of Comparative Economics*, 36, pp.74-89.

Vickers, J. and Yarrow, G. (1991) Economic perspectives on privatization. *Journal of Economic Perspectives*, 5, pp.111-132.

Villalonga, B. and Amit, R. (2006) How do family ownership, control, and management affect firm value? *Journal of Financial Economics*, 80, pp.385-417.

Volpin, P.F. (2002) Governance with poor investor protection: evidence from top executive turnover in Italy. *Journal of Financial Economics*, 64, pp.61-90.

Walking, R.A. and Long, M.S. (1984) Agency theory, managerial welfare, and takeover bid resistance. *The RAND Journal of Economics,* 15, pp. 54-68.

Wang, C. (2005) Ownership and operating performance of Chinese IPOs. *Journal of Banking and Finance,* 29, pp.1835–1856.

Wang, X., Xu, L. C. and Zhu, T. (2004) State-owned enterprises going public: the case of China. *Economics of Transition,* 12, pp.467–487.

Wei, G. (2007) Ownership structure, corporate governance and company performance in China. *Asia Pacific Business Review*, 13, pp.519-545.

Wei, Y. (2002) Corporatization and privatization: a Chinese perspective. *Northwestern Journal of International Law and Business*, 22, pp.219–234.

Wei, Z. (2010) Determinants and value of cash holdings: evidence from China's privatized firms. *Working paper,* University of Texas at El Paso.

Wei, Z., and Varela, O. (2003) State equity ownership and firm market performance: evidence from China's newly privatized firms. *Global Finance Journal,* 14, pp.65–82.

Wei, Z., Xie, F. and Zhang, S. (2005) Ownership structure and firm value in China's privatized firms: 1991–2001. *Journal of Financial and Quantitative Analysis*, 40, pp.87–108.

Weisbach, M.S. (1988) Outside directors and CEO turnover. *Journal of Financial Economics*, 20, pp.431-460.

Weitzman, M. and Xu, C.G. (1994) Chinese township and village enterprises as vaguely defined cooperatives. *Journal of Comparative Economics*, 18, pp.121-145.

Whalley, J. and Xin, X. (2006) China's FDI and non-FDI economies and the sustainability of future high Chinese growth. *Working Paper.*

Wong, C.P.W. and Bird, R.M. (2008) China's fiscal system: a work in progress. in *China's Great Economic Transformation* (Eds: Brandt, L. and Rawski, T. G.), Ch.12. New York: Cambridge University Press.

World Bank (2002) China: national development and subnational finance, a review of provincial expenditures. Washington, DC: World Bank.

Wortzel, H.V. and Wortzel, L.H. (1989) Privatization: not the only answer. *World Development*, 17, pp. 633– 641.

Xu, C.G. and Pistor, K. (2003) Law enforcement under incomplete law: Theory and evidence from financial market regulation, *Working Paper*, Columbia Law School.

Xu, X. N. and Wang, Y. (1999) Ownership structure and corporate governance in Chinese stock companies. *China Economic Review*, 10, pp.75-98.

Yang, J.J., Chi, J. and Yong, M. (2011) A review of corporate governance in China. *Asian-Pacific economic literature*, 25(1), pp.15-28.

Yermack, D. (1996) Higher valuation of companies with a small board of directors. *Journal of Financial Economics,* 40, pp.185-211.

Yermack, D. (1997) Good timing: CEO stock option awards and company news announcements. *Journal of Finance*, 52, pp.449-476.

Zhang, T. and Zou, H. (1998) Fiscal decentralization, public spending, and economic growth in China. *Journal of Public Economics*, 67, pp.221–240.