

ONE HAT TOO MANY - CEO DUALITY, GLOBAL  
FINANCIAL CRISIS AND PERFORMANCE OF  
CHINESE FIRMS

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(*MBA, B.Pharm*)

A DISSERTATION SUBMITTED  
FOR THE DEGREE OF DOCTOR OF BUSINESS  
ADMINISTRATION

FACULTY OF BUSINESS AND LAW  
THE UNIVERSITY OF NEWCASTLE AUSTRALIA

2012

## **STATEMENT OF ORIGINALITY**

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**Cho-tung, Charles Lam**

## **ACKNOWLEDGEMENT**

I would like to dedicate my dissertation to my parents who gave me the opportunity to study abroad. Australia is indeed a multicultural country offering me a wonderful environment to further my studies and develop my professional career. It had always been my wish to obtain a doctoral degree when I was studying pharmacy. But, I had to give up the scholarship and start to make a living when my father was critically ill.

I am grateful that I have the opportunity to fulfill my wish 20 years after the completion of MBA. I would like to express my deepest gratitude to my supervisor, Professor Abul Shamsuddin, who supported me with excellent advice throughout my candidature. This dissertation would not be possible without his assistance.

A huge word of gratitude is owed to my wife and my young son who have been patient with me over the past four years while I was taking up the challenge to finish the 10 management subjects and the dissertation in the midst of a new business venture. I did miss a lot of the wonderful moments in the growth of my son since his birth.

Last but not the least, I wish to express my appreciation to my DBA teammates, Henry Lam, Owen Tam and Ruth Kan for sharing their ideas, helpful comments and above all, encouragement.

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## **ABSTRACT**

The recent global financial crisis has been seriously impacting firms worldwide since its eruption in 2007. No doubt, corporate leadership plays an important role in steering firms away from crisis. According to agency theory, CEO duality, with Chief Executive Officer (CEO) also wearing the hat of Chair of the Board (COB), could lead to an overpowering leader serving his or her own agenda. The Code on Corporate Governance Practices implemented by the Stock Exchange of Hong Kong thus recommends the separation of the titles as of 2005, but CEO duality continues to top the list of non-compliance of the Code Provisions.

This dissertation is the first longitudinal study to measure the effect of CEO duality on performance of Chinese state-owned enterprises listed in Hong Kong and the moderation effect of the global financial crisis on their relationship. A sample of 49 H-shares and 28 Red-chips with a total of 539 firm-years over the 2004 – 2010 period is chosen for the empirical analyses. The direction of effect of CEO duality on performance of the Chinese firms is a priori indeterminate. The empirical result suggests that CEO duality does not affect performance of HK-listed Chinese firms. However, in the presence of global financial crisis, CEO duality has a significant and negative impact on their firm performance. Contrary to general belief, the global financial crisis has a significant and positive effect on firm performance of the Chinese firms. This is probably due to the ability of firms with both CEO and COB to respond prudently and collaboratively to the global financial crisis and opportunities presented by economic stimulus policies of the Chinese government during 2008 - 2010.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 INTRODUCTION**

Financial crises and collapses of large multinational corporations like Enron, WorldCom and Lehman Brothers have attracted considerable public attention over the last couple of decades. Stakeholders and institutional investors are demanding changes in corporate governance (CG) and strong regulatory enforcement (Ramdani and Witteloostuun, 2009). Some governments support these activist moves with more stringent regulations and laws like US “Sarbanes-Oxley 2002”, the People’s Republic of China “Provisions to Protect Interests of Public Investors 2004” and Hong Kong “The Code on Corporate Governance Practices 2004” (HK-CG Code), calling for better CG.

CEO duality refers to a firm’s Chief Executive Officer (CEO) and Chair of the Board (COB) being the same person. This arrangement is often criticised as it tends to lead to a concentration of power in one person, defeating the purpose of the board supervising the CEO and the management team of the firm. Increasing numbers of regulatory authorities have been demanding separation of the roles of CEO and COB. However, literature, both theoretical and empirical, on the impact of CEO as COB on

firm performance, provides mixed results (Dalton et al., 1998; Lam and Lee, 2008; Peng et al., 2007; Rhoades et al., 2001). Amongst the key principles like stewardship theory, contingency theory, institutional theory and resource-dependency theory, agency theory is widely accepted as the driver for change in CEO duality. Agency theory suggests the separation of the role of COB and CEO to improve accountability of the CEO and independence of the Board (Dalton et al., 1998). This principle is popular as most national regulatory authorities mandate non-duality for listed firms. The Hong Kong Exchanges and Clearing Ltd (HKEx) listing guidelines also recommend the practice (HKEx, 2005a). Most recent duality studies are in favour of contingency theory, asserting that both CEO duality and non-duality could affect firm performance under certain conditions such as board independence and environmental factors (Brickley et al., 1997; Dalton et al., 1998; Lam and Lee, 2008; Peng et al., 2007).

The People's Republic of China (PRC) has been carefully restructuring its state-owned enterprises (SOEs) and placing them on the stock market through Hong Kong in the past couple of decades. Despite Chinese firms emerging with some of the world's largest market capitalisation and their growing influence on the global economy, there has been a lack of study of corporate governance and the important corporate leadership structure of these Chinese conglomerates (Peng et al., 2007). The implementation of HK-CG Code of HKEx in 2005, recommending the split of title of CEO and COB, prompts further research to evaluate its impact on performance of listed firms (HKEx, 2005a; HKEx 2005b). Does CEO non-duality have any impact on the economic performance for listed Chinese enterprises in Hong Kong? The aim of this study is to employ quantitative standard regression methods to measure the effect

of CEO duality on the operating performance of the Chinese firms listed in Hong Kong during the period of 2004 to 2010.

In this chapter, the background of the global financial crisis (GFC), CEO duality and HK-listed Mainland Chinese firms are briefly described. A summary of the study together with the research questions, hypotheses and methodology are presented. The current research gap, the objective of the dissertation and its contribution are discussed.

## **1.2 PURPOSE OF THE DISSERTATION**

The recent GFC has demonstrated the fragility of prevailing corporate governance in major financial corporations. Although the crisis was sparked by the collapse of the US subprime mortgage market in 2007, it quickly spread from the financial sector and caused a meltdown of major stock markets around the globe with close to half of their value lost by March 2009. Failure in corporate governance has undoubtedly been a significant contributor to the crisis, and suggests strengthening of the monitoring capacity of the board (Tomasic, 2011). Board of directors (BODs), leadership and their structure have often been the subjects of heated discussion of corporate governance (Bruce, 2010). There have been numerous studies to understand their effects on firm performance, but the results are mixed.

Hong Kong is recognised as having a high standard of corporate governance (ACGA, 2007). It has experienced significant reform of CG over the last couple of decades



with the unveiling of the Cadbury report in the late 1980s. Even though HK-CG Code has been in force as of 2005, public companies still choose not to follow some of its requirements (HKEx, 2005b). CEO duality consistently tops the list of non-compliance (HKEx, 2010a).

There have been huge numbers of Chinese firms listed both locally in Hong Kong and overseas (Li et al., 2011). They attract significant interest and investment from the financial community. This is reflected by their huge market cap of over US\$668 billion with 526 stocks on the main board of Hong Kong by the end of 2010 (HKEx, 2010b). These Mainland Chinese enterprises derive over half of their revenue from PRC. Their unique characteristic and operating environment present a challenge in the understanding of their practice of corporate governance.

While the debate on CEO duality has continued for several decades in Western countries, it has only recently appeared in the East. Unfortunately, there is general lack of understanding of corporate governance of this rapidly growing group of Chinese companies. This dissertation attempts to study Chinese companies and their performance under the Code Provisions with a period of recent GFC in light of the theoretical and empirical studies of the CG research. The lack of CG study of influential Chinese firms is a research gap that prompts the researcher to study the relationship of the controversial board leadership structure and the performance of the large number of Mainland Chinese firms. The purpose of this paper is to utilise the pool of Chinese companies listed in Hong Kong to provide insights into the effect of CEO duality on firm performance. The Code Provision A2.1 of the Code on Corporate Governance Practices 2004 by HKEx recommends splitting the titles of

CEO and COB. In addition, the moderation effect of the GFC between 2008 and 2010 on the relationship of CEO duality and firm performance is evaluated to confirm the validity of contingency theory. Differences between the two major groups of the Chinese firms, H-shares and Red-chips, are also highlighted.

### **1.3 AN OVERVIEW OF THE STUDY**

The current global financial crisis is of epidemic scale spreading worldwide, heavily impacting the global economies. The collapse of Lehman Brothers cannot possibly have achieved such devastating effect on financial industries unless there was fundamental failure of the corporate governance system with ineffective regulations (Gupta et al., 2011). Leadership is often seen as a key success factor of corporations. It is particularly valuable in turbulent times as leaders often possess the necessary skill set and experience to guide the firm in the best direction. It is thus useful to understand if corporate leadership structure in fact has any causal effect on the firms during the GFC. CEO duality as a board leadership structure with the arrangement of firm's CEO and COB being the same person is often criticised as it tends to lead to a concentration of power in one person and defeats the purpose of the board supervising the CEO and the management team of the firm. A COB provides check and balance against a self-serving chief executive. Combining the two roles will compromise this internal control mechanism (Fama and Jensen, 1983; Finkelstein and D'Aleni, 1994). An increasing numbers of regulatory authorities worldwide have been recommending separation of the roles of CEO and COB for check and balance. The public also has a

general preference to separate the titles of corporate leaders for fear of an over-powering CEO.

However, major theories are divided on the choice of corporate leadership structure and firm performance. Agency theory suggests that CEOs are self-interested whereas stewardship theory considers them as altruistic. Nonetheless, regulators and government agencies tend to adopt the agency view in tightening regulations. Both agency and stewardship theory are popular and widely accepted, yet they may be too simplistic in explaining the mixed empirical results on the impact of CEO duality and firm performance. Firms differ a lot in their development stage, in industry type and in their operating environment. Contingency theory allows for the complexity of both internal and external factors to come into play (Dalton et al., 1998; Lam and Lee, 2008; Peng et al., 2007; Rhoades et al., 2001).

Institutional theory asserts that firms only carries out the minimum that is legally required of them (DiMaggio and Powell, 1983). This is evident with the serious breach of CEO duality of the non-statutory provisions of HK-CG Code compared with the 100 percent compliance of the legal requirement of the number of independent directors for listed companies. On the other hand, resource-dependency theory recommends CEO non-duality with two leaders who could each focus on different areas of key resources. This is particularly useful when firms are facing environmental dynamism and resource scarcity. This is echoed by the recently favoured contingent theory, suggesting that firm performance is affected by a whole host of factors of intrinsic firm characteristics and exogenous environmental factors (Brickley et al., 1997; Dalton et al., 1998; Lam and Lee, 2008). CEO duality and non-

duality could be good or bad depending on the interactions of the complexity of factors at play. Thus, contingency theory does not carry a particular view on the direction of effect of CEO duality on firm performance.

Likewise, empirical evidence of CEO duality on firm performance is equally conflicting. There are large numbers of empirical studies that are either in favour of or against CEO duality. The results are not conclusive. Contrary to the Asian results that are generally in favour of non-duality (Chen et al., 2005; Cheung et al., 2007; Nowland, 2008), the Chinese studies by Peng et al (2007) and Yu (2009) highlight the importance of dynamism in environment in moderating the effect of corporate leadership structure on firm performance in developing economies. Their results, showing the positive economic benefit of CEO duality to the firms, appear to undermine the recommendation by regulatory authorities in separating CEO and board Chair. Thus, there exists a gap in research into the benefits of both performance and risk of the two-tier corporate leadership structure of the group of Chinese conglomerates listed in Hong Kong since the introduction of the listing requirement on CEO non-duality in 2005. Listed firms in Hong Kong are still allowed to maintain CEO duality as long as they report it in their annual report (HKEx, 2010b). Over one third of the surveyed companies (37%) did not comply with the Code Provision A.2.1 of the Listing Guideline on the separation of the role of CEO and COB in 2006, 2007 and 2009, as shown in the summary report by the HKEx (2010a). It is expected that most firms would have considered the costs and benefits in arriving at the leadership choice. The resistance to the recommended non-duality reflects the preference of over one third of the listed companies. Hence, the question for the proposed research is: does CEO non-duality help to increase firm performance and mitigate risk in the

protection of stakeholder interest, as stipulated by the HKEx in its listing guideline? In this research, multiple theoretical lenses are used to study the effect of the important corporate leadership structure in the Chinese firms listed in Hong Kong, and their operating performance.

## **1.4 RESEARCH QUESTIONS AND HYPOTHESES**

CEO duality is often a subject of heated debate in corporate governance. The ambiguous results from empirical research on the impact of CEO duality on performance and the listing requirement on the separation of the roles of CEO and COB by the HK-CG Code suggest further study of their relationship, especially for the influential group of HK-listed Chinese companies. The direction of the causality amongst the variables is of particular interest. As a result of the GFC, a more recent picture of firm performance and the impact of leadership structure is obtained by using a set of financial and accounting ratios of firm performance and market valuation proposed by Cheung et al. (2007) and Lam and Lee (2008) for the HK-listed Chinese firms for the period of 2004 to 2010.

From the literature, two sets of alternate and contradictory hypotheses are suggested for the research questions.

H<sub>1</sub>: CEO duality *positively* affects performance of the HK-listed Chinese firms.

CEO duality was common amongst Mainland Chinese listed firms in the 1990s (Zhang, 2008). With increased media and public scrutiny, as well as regulatory and academic pressure, these corporations started to abandon duality and increased the separation of CEO and COB roles from a level of approximately 40% of firms in early 1990 to 70% by the end of the decade (Bai et al., 2004). According to stewardship theory, CEO duality helps avoid infighting between two corporate heads and reduces information costs amongst the multiple parties of the board, CEO and COB (Baliga, et al., 1996). It avoids diluting power of the leader especially at times of its early development and crisis, promoting a single focal point of corporate leadership and thus unity for the firm (Stoeberl and Sherony, 1985; Tan et al., 2001). This is echoed by the proponents of contingency theory, supporting the economic benefits of CEO duality under specific conditions of the firm and its environment (Peng et al., 2007; Yu, 2009)

H<sub>A,1</sub> CEO duality *negatively* affects firm performance of the HK-listed Chinese firms

In contrast, agency theory favours splitting both titles to reduce the agency cost of CEO wearing both hats (Rechner and Dalton, 1991) It is found that CEO duality inherently increases risk and bankruptcy rates (Daily and Dalton, 1994). It is not uncommon for the public, media and institutional investors to hold CEO duality as the scapegoat of business scandals, demanding the protection of regulatory bodies from an over-powering CEO who could dictate the agenda of the board.

H<sub>2</sub>: Global financial crisis *negatively* moderates the relationship between CEO duality and firm performance.

There is a positive correlation between bank crisis during the eruption of the Asian financial crisis and the relationship of CEO duality and firm performance in 1997 (Tan et al, 2001). The subprime mortgage crisis displayed similar characteristics of a much larger scale, erasing around US\$25 trillion from stock markets

H<sub>A,2</sub>: Global financial crisis *positively* moderates the relationship between CEO duality and firm performance

The economy took a sharp turn when governments worldwide started injecting large sums of money into the financial market to improve its liquidity and lending. This not only boosted consumer confidence and spending, but also allowed a strong comeback of exports for the Chinese firms. These changes had a significant and positive effect on firm performance. The relationship of leadership structure and corporate results could be contingent on serious external events. This is in line with stewardship theory suggesting that undivided board leadership is particularly useful to board at times of crisis.

## **1.5 RESEARCH METHODOLOGY**

The research adopts a positivistic approach of methodology by collecting and analysing quantitative data to produce quantifiable conclusion. It seeks to explain how leadership structure interacts with key elements of corporate governance of the HK-listed Chinese firms to enhance their performance. Secondary data from the public

domain is used for the study, and hence human research ethics approval is not required. Quantitative statistical analyses, t-test and linear regression analyses are employed for the research with secondary data collected from annual reports and official websites of the Chinese firms and HKEx. The major considerations that guide the research design are:

1. Adopting a contextual perspective to the effect of CEO duality on firm performance;
2. Adopting the regression technique so as to construct an empirical model describing the relationships between firm performance and CEO duality, controlling for environmental and firm-specific determinants of performance.

There are a large number of variables that could affect firm performance. Some earlier studies (Abdullah, 2004; Daily and Dalton, 1997; Rechner and Dalton 1991) do not take into account the effects of these control variables in assessing the relationship between CEO duality and firm performance. They are criticised for contributing to the ambiguous results (Elsayed, 2007). This dissertation attempts to use statistical methodology to study the influence of selected corporate governance variable of CEO duality on firm performance, giving due consideration to ten control variables of market valuation, risk measurements and accounting ratios such as industry, firm age and size to evaluate the empirical model using panel data of 138 HK-listed Chinese firms over a period of seven years between 2004 – 2010, prior to and during a turbulent market situation of GFC. The data of leadership structure and corporate results are extracted from public source of annual reports of listed companies. Information on firm size, firm age and industry are obtained from the websites of HKEx and government agency.



## **1.6 SIGNIFICANCE AND CONTRIBUTION OF THE RESEARCH**

China is emerging as the world's second largest economy in terms of GDP with its firms achieving some of the world's largest market capitalisation. Its growing influence in the region and in the global economic scene is worth investigation. Nevertheless, Chinese firms present a unique agency problem, as the controlling shareholder of these SOEs, is usually the Chinese government. The unquestioned adoption of Western management practice may not necessarily do justice to the Mainland Chinese firms in transition within the unique business environment of corporate ownership and cultural context of China (Nowland, 2008; Peng et al., 2007).

Endogeneity of corporate leadership structure is the subject of this study with respect to the exogenous environmental factors such as the GFC. Therefore, this research contributes to the better understanding of the practice of CG with board leadership structure of HK-listed Chinese companies to further their economic performance and mitigate firm risk. This study fills the existing gap, making provisions for the local culture and business environment of Hong Kong and China. The results are important to institutional investors and local regulators as they attempt to introduce mandatory and best practice for the Boards of listed companies, in view of the current financial crisis.

The controversial CEO duality tops the list of non-compliance of the Code Provisions requirement of HKEx, and its effect on firm performance remains a serious CG topic.

It is expected that firms would adopt a governance structure that maximises their value and profit. They will spend the least efforts to satisfy the statutory requirement as shown in the case of compliance of HK-CG Code 2004 (DiMaggio and Powell, 1983; HKEx, 2010a). This dissertation is the first longitudinal study to provide insights into the relationship of corporate leadership of the HK-listed Chinese companies with H-shares and Red-chips in particular and their performance under the Code Provisions with the background of the recent GFC.

It is found that CEO duality negatively affects the performance of Chinese firms. On the other hand, GFC has a positive effect on their performance, including both H-share and Red-chip companies. In addition, the GFC has had a positive moderation effect on the relationship of CEO duality of Chinese firms. This could be due to the unparalleled monetary easing and fiscal stimulus policy of the Chinese government shortly after the eruption of the crisis.

## **1.7 OUTLINE OF THE DISSERTATION**

In Chapter Two of literature review, major theories of corporate leadership are examined. The ongoing debate over CEO duality and firm performance is reviewed. Together with a background of business environment and corporate governance in Hong Kong, the history of the development of Mainland Chinese firms and their listing in Hong Kong of the last few decades are introduced. The fundamental

differences between the two groups of H-share and Red-chip companies listed on the main board of Hong Kong are examined.

Chapter Three covers the important research paradigm, research design and research process of the study. The research questions and corresponding hypotheses are put forward. Details of the quantitative method, sampling technique, data source and the choice of variables are discussed. The empirical model and the data preparation are described in Chapter Four. The correlation and t-tests results are presented together with the key findings.

In the final chapter, the important findings are interpreted and discussed, highlighting the differences between H-share and Red-chip firms with sub-group analysis. The theoretical and practical implications of the moderation effect of global financial crisis on the relationship of CEO duality and performance of HK-listed Chinese firms are explored. The limitations of the study and suggestions of potential topics for future studies are also noted.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The debate on CEO duality has continued for several decades and there is a large body of literature on the subject. There are a number of conflicting theories covering the important subject of corporate leadership structure. Empirical evidence on the impact of CEO duality on firm performance is similarly mixed. This dissertation attempts to investigate the consequences of the Global Financial Crisis on the relationship of CEO duality and performance of Chinese firms.

In this chapter, the literature on the various theories of corporate leadership structure is reviewed. It further examines the history and characteristics of the Mainland Chinese firms that emerged over the last few decades. In particular, the fundamental differences between H-share and Red-chip companies listed on the main board of Hong Kong are discussed, covering corporate governance characteristics of these HK-listed Chinese firms. The literature on the Hong Kong corporate governance environment and the issues about CEO duality and nomination committee are examined. Studies on the leadership structure before and after the implementation of the HK-CG Code are reviewed. In addition, the literature on the global financial crisis is surveyed in the context of CG and firm performance.

## **2.2 THE MAJOR THEORIES ON CORPORATE LEADERSHIP STRUCTURE**

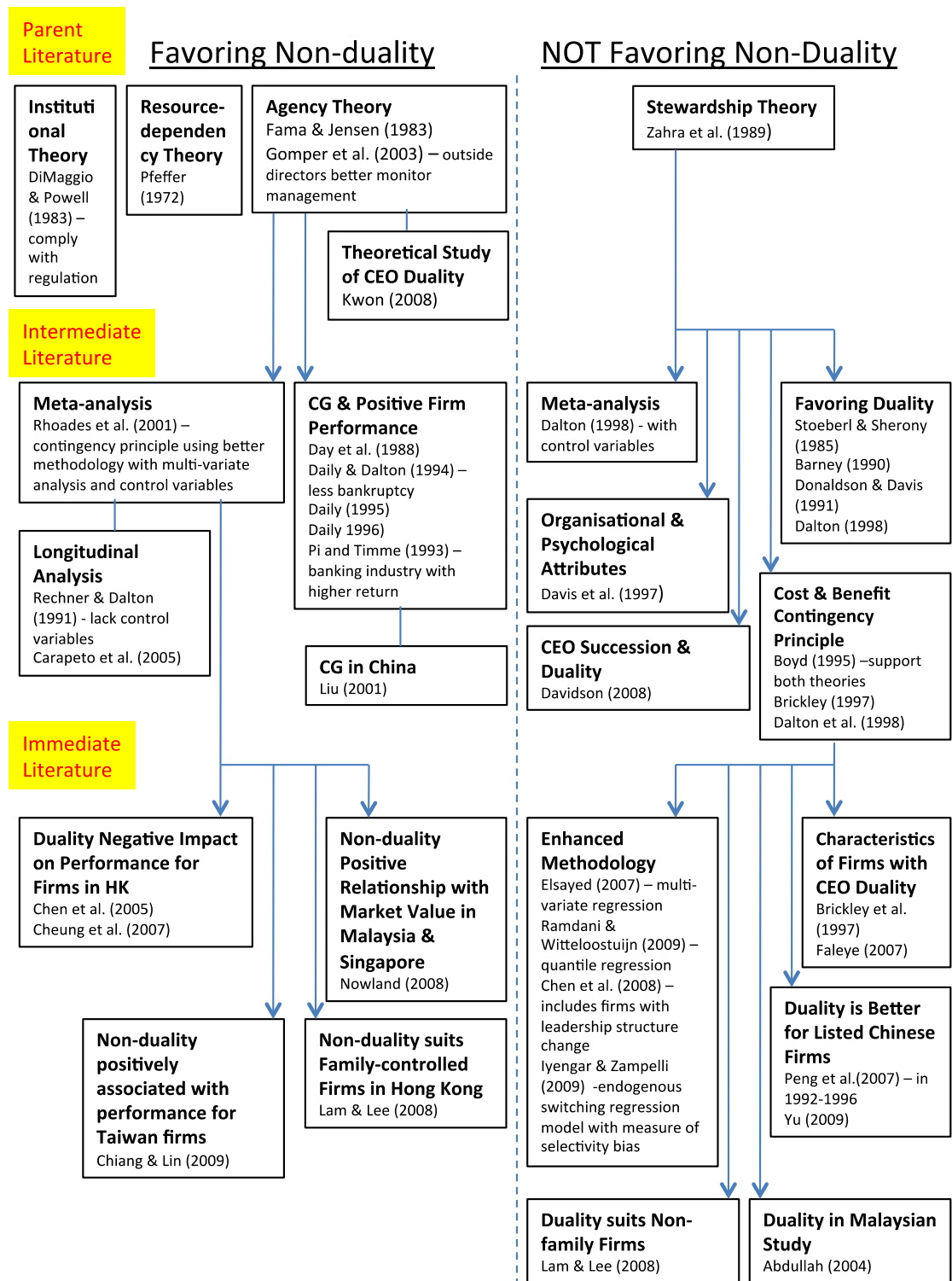
### **2.2.1 Introduction**

Board leadership structure, amongst all the factors, is particularly important to listed companies of sizeable scale and scope of business in delivering firm performance. This section reviews some of the major theories on corporate governance and in particular, board leadership. Modern literature describes two structures of board leadership – a one-tier system and a two-tier system. The one-tier system with both the CEO and Chair being the same individual, tends to result in a concentration of power (Berg and Smith, 1978; Brickley et al., 1997). Thus, there is a general preference for the two-tier system with separate leadership to monitor any conflict of interest.

### **2.2.2. Construction of Literature Map**

The theoretical and empirical evidence on the research of corporate leadership structure is conflicting. There are two schools of thoughts on this controversial subject, one in favour of non-duality and one sceptical of it. The review starts from the top of the literature pyramid with principal theories like agency theory and stewardship theory, and moves to intermediate literature of empirical studies and academic

research on CEO duality and firm performance. There are meta-analyses that support either direction of causality of CEO duality on firm performance (Dalton et al., 1998; Rhoades et al., 2001). Finally, at the bottom of the literature pyramid, it is the group of immediate and recent studies related to firms in developing countries of Asia and Greater China, including Hong Kong, Taiwan and the PRC. The literature is summarised and mapped out with details on the principal theories of agency and stewardship theory in Figure 2.1. Contingency theory is not shown on either side of the map as it could be in favour of CEO duality or against it depending on the direction of effect of the causal factors.



**Figure 2.1** Literature Map of the Principal Theories of Corporate Leadership

### **2.2.3 Agency Theory**

With the separation of control and ownership in modern organisations and the subsequent agency problem between owners and agent, the board becomes an important control device of corporate governance to motivate and align the interest of top management with that of stakeholders. Fama (1980), Jensen and Meckling (1976) are most frequently cited for their agency theory on corporate leadership. Agency theory with its focus on industrial and organisational economics, has received wide popularity and represents the mainstream view of institutional investors, academics, regulatory and professional bodies (Tian and Lau, 2001). The theory assumes that human nature is opportunistic and self-serving. Managers are motivated to follow their self-interest instead of acting in the best interest of the shareholders. In order to reduce the principal-agent conflict, a number of control devices and mechanisms, both internal and external, are needed to be put in place.

The board is no doubt a vital internal control mechanism to direct and monitor management in the pursuit of stakeholder value. It is given the prerogative to hire and to fire the company's CEO. Duality thus violates the rubric of separating decision control from decision management and increases agency costs. The lack of independent leadership structure and an independent nomination committee limits the board's ability to effectively monitor the decisions of the CEO and to terminate the service of a non-performing CEO. This allows CEOs to advance their own personal agenda at the expense of the stakeholders (Berg and Smith, 1978; Carapeto et al., 2005; Pi and Timme, 1993; Rechner and Dalton, 1991). According to the assertion of



agency theory, a CEO is an opportunistic self-interest seeker (Elsayed , 2007). There is evidence that duality leads to a higher level of incentive for CEO (Petra and Dorata, 2008). Thus CEO duality reduces the level of monitoring of board of directors (BOD) over management, which negatively affects corporate performance (Daily and Dalton, 1994).

Rechner and Dalton (1991) provide empirical evidence in their study of Fortune 500 companies that firms with separate titles of CEO and COB outperform those with a single-tier structure of CEO duality in terms of profit margins, return on equity (ROE) and return on investment (ROI). Consistent with these results, Pi and Timme (1993) conclude that a two-tier non-dual leadership structure achieves a higher accounting return for the banking industry. In addition, Daily and Dalton (1994), suggest a strong and statistically robust relationship between duality and bankruptcy filings. High-profile superstar managers are found to receive significant increase in compensation, which suggests their opportunistic tendency to extract rents from the principal (Malmendier and Tate, 2009). The takeover targets of US firms usually suffer from duality, which confirms the exacerbation of the agency problem (Bange and Mazzeo, 2004).

Asian studies are generally in favour of non-duality (Chen et al., 2005; Cheung et al., 2007; Nowland, 2008; Lam and Lee, 2008). Separated leadership of chairperson and CEO in Malaysia and Singapore are found to have a positive relationship with market value (Nowland, 2008). Earlier studies in Hong Kong on CEO duality and firm performance also confirmed a negative relationship between them (Chen et al., 2005;

Cheung et al., 2007). However, the finding of Lam and Lee (2008) using public financial data in 2003 suggests CEO non-duality is better for family-controlled firms whereas duality suits non-family firms in Hong Kong.

#### **2.2.4 Stewardship Theory**

Although agency theory offers a powerful theoretical perspective, it fails to explain how self-interest alone could guide the diverse managerial decisions (Zahra and Pearce, 1989). This perspective is nevertheless rather narrow as it fails to cover the many roles of BOD within its corporations other than the monitoring aspect (Eisenhardt, 1989; Hillman and Dalziel, 2003). In contrast to the fundamental belief of agency theory, Stoeberl and Sherony (1985) put forward stewardship theory, which assumes that executives are good stewards of firms as they work towards a “goal alignment” to improve firm performance on their own accord (Davis et al., 1997). Fayol (1949) in his administrative theory contends that CEO duality encourages unity of command from the top management, offering undivided focus of company leadership with an unambiguous authority. Thus, it helps to provide a single channel of communication between management and the BODs and project a perception of stability, instilling confidence in the firm’s management (Donaldson and Davis, 1991). This could avoid conflicts or in-fighting at senior level, encourage effective management decision, and improves organisational efficiency (Finkelstein & D’Aveni, 1994).

Similar stewardship argument is echoed by advocates of organisational theorists, Anderson and Anthony (1986), Donaldson and Davis (1991). Carapeto et al. (2005) in their analysis of the announcement effects of changes in CEO duality of UK firms, find a significant positive (negative) relationship of abnormal return for the split (combine) of the leadership roles. Nonetheless, the link between duality and subsequent operating performance is weak. Agency cost is neither mitigated by the split of the dual roles nor exacerbated by combining both leadership titles.

CEO duality is found to relate positively to both market performance and accounting indicators (Wallace and Cravens, 1997). Brickley et al. (1997) further enrich the organisational study by bringing up the concept of cost and benefit of the two different leadership structures. Separating the roles of CEO and COB may reduce the agency costs of monitoring the CEO, but this is not costless. It may in fact double the efforts of monitoring and controlling the agency behaviour of both the COB as well as the CEO (Brickley et al., 1997). They theorise that combining the titles could create better overall benefits for larger organisations. On the other hand, non-duality may dilute the power of effective leadership and add to further confusion amongst the board and management with the potential rivalry between the CEO and COB (Baliga, et al., 1996). Beside agency cost, the researchers also identify information and incentive costs of having both CEO and COB. CEO duality could reduce these costs. Nonetheless, the costs of CEO duality may still outweigh the benefits of separating the titles.

In fact, the classical assumption under agency theory is that directors are good stewards for the shareholders and monitor the managers on behalf of investors.

Warther (1998), as well as Hirshleifer and Thakor (1994), propose that the financial incentive and reputation in executive job market of the directors and the CEOs are significantly related to their performance in the firms. This will enable alignment of their interest with that of shareholders. According to Conyon and Peck (1998), CEO remuneration is not necessarily pushed up by the presence of duality in the U.K. The CEOs are accountable for their own behaviours as their reputation and financial capital are equally at stake. A better alignment of incentive and interest could thus help mitigate the agency cost of duality by offering a CEO an adequate level of shareholdings.

#### **2.2.5 Contingency Theory**

There are large numbers of studies, which do not demonstrate any significant effect of board leadership structure on firm operating performance (Dalton et al, 1998; Dulewicz and Herbert, 2004; Lam & Lee, 2008). Baliga, et al. (1996) propose that a firm's duality does not affect stock price either positively or negatively and only influences long-term performance weakly. This is also echoed by the research findings in countries such as Switzerland (Schmid and Zimmermann, 2008), Malaysia (Abdullah, 2004) and Hong Kong (Lam and Lee, 2008).

According to Brickley et al. (1997), both leadership structures have their costs and benefits. There is no obvious theoretical advantage of one form over the other. In the long run, firm performance of either combined or separate leadership is balanced. There is evidence that empirical results of duality studies are biased or limited to

specific circumstances as researchers only study either costs or benefits of CEO duality (Brickley et al, 1997). The costs and benefits of CEO duality are contingent upon organisational factors, either internal or external. CEO duality may be detrimental to firms under some situations and beneficial under others (Finkelstein and D'Aveni, 1994). Contingent theory asserts that CEO duality is a double-edged sword. The environment, its culture and legacy are the key considerations for the choice of board leadership (Brockmann, et. al., 2004). This dissertation seeks to identify the environmental factors that perform as moderator or the circumstances that agency or stewardship theory applies.

The choice of CEO duality is situational as empirical research proposes that the interplay between the board and the CEO is dynamic. In a longitudinal study, Boyd (1995) estimates that duality has a positive effect on firm performance in the subsequent years after controlling for their environmental factors. It is positively associated with performance in complex and low munificence environments. CEO duality is preferable for firms in turbulent and complex circumstances, e.g. bankruptcy (Tan et al., 2001). The power of the leader and hence the tendency of CEO duality is also found to positively associate with the length of bankruptcy (Brockmann et al., 2004).

A study of 405 Chinese enterprises listed on the Stock Exchanges of PRC Shenzhen and Shanghai provides evidence of a robust and positive impact of combining CEO and COB on organisation performance in sales growth or ROE over 5 years during 1992 – 1996 (Peng et al., 2007). Yu (2009) arrives at a similar conclusion using Chinese data between 2002 and 2003. Finally, Faleye (2007) examines a large sample

of 1,883 US COMPUSTAT firms, identifying CEO reputation, firm complexity and governance structure as the mediating factors of CEO duality on firm performance. Similar to Boyd's (1995), his result is more compelling and reports a positive relationship between CEO duality and firm performance for high reputation CEOs or complex firms. The impact of duality is dependent on firm and CEO characteristics. This is in line with most recent duality studies in favour of contingent theory which suggests that both duality and non-duality could influence organisation performance under certain conditions like environmental factors, board independence, corporate ownership and control (Brickley et al., 1997; Dalton et al., 1998; Peng et al., 2007; Lam and Lee, 2008; Rhoades et al., 2001; Tan, 2008).

There are many internal and external factors that could affect the choice of leadership typology. The abilities and personalities of a CEO as well as the life stage of the firms should be considered when boards make duality leadership decision. Depending on the psychological attachment to organisation, a CEO may act as either agent or steward (Wasserman, 2006). A leader who identifies with the firm will behave as a steward and benefits the board with less agency problem. Duality may be beneficial to a rapidly growing company in its early stage by providing a strong and clear figure of authority (Lynall et al., 2003). On the other hand, CEO duality is less desirable for profitable firm with a long-serving CEO to avoid entrenchment. Family ownership is also an important factor in determining the outcome of CEO duality on performance of HK-listed firms as confirmed by the empirical study of Lam and Lee (2008). Duality is found to suit non-family firms in Hong Kong.

“The agency model of the CEO-Chair as the opportunistic, self-maximising shirker is as extreme a model as stewardship’s depiction of the CEO-Chair as the altruistic, self-sacrificing steward of corporate assets” (Boyd, 1995, p.304). Neither perspective of the debates is subscribed by contingency theory as the results are often dependent on the environmental factors of firms (Boyd, 1995). Indeed, the contingency theory could help integrate the two divergent perspectives. It is argued that regulatory bodies should not simply enforce non-duality as the only leadership structure for firms worldwide.

#### **2.2.6 Resource-dependency Theory**

Firms compete for important resources, and they are in many ways dependent on the external environments characterised by uncertainty. This is the premise of resource-dependency theory, which highlights the competitive advantage of possessing critical resources like talents, finance, distribution and network (Pfeffer, 1972). The theory extends its discussion not only to the roles of BODs as effective providers of expertise, knowledge, network contacts or skill set as strategic resources but also as boundary spanners with the environment to increase legitimacy of the firm and at the same time reduce uncertainty (Pfeffer and Salancik, 1978). With two top-level leaders focusing on different areas of key success resources, firms are likely to fare better. This is in support of non-duality especially for companies with industry and firm complexity. Firms in the midst of a turbulent business environment or rapid growth during their early stages of development could do better if they tap into more key resources.

Resource-dependency theory thus offers a contingency perspective of environmental dynamism and resource scarcity to the study of CEO duality (Boyd, 1995; Peng et al., 2007; Tan et al., 2001). It is considered a subset of contingency theory, highlighting the important links between firms and their environment, and moves beyond the conventional principal-agent or owner-manager relationship. It is an increasingly popular conceptual model adopted by researchers in their study of corporate governance and the roles of BOD (Gabrielsson and Huse, 2004).

#### **2.2.7 Institutional Theory**

Institutional theory argues that firms only perform the least to satisfy legal requirements. This is evident by the fact that 100 percent of HK-listed firms comply with the listing rules on the requirement of having an audit committee whereas there is only a small percentage of firms having a nomination committee or CEO non-duality as they are non-statutory recommendations by the HK-CG Code (HKEx, 2010a). The growing number of external directors on the board may also stem from pressure to comply with regulation. This highlights the importance of ‘substance over form’, which is often missed by regulators. As a result, it does not necessarily lead to better corporate governance or firm performance (DiMaggio and Powell, 1983).

#### **2.2.8 Summary**



There is a weakness in the existing theories guiding the key thinking on corporate leadership structure. Major theories of agency and stewardship appear simplistic and are starting to give way to the more sophisticated contingency theory, which allows organisational and environmental factors to be taken into consideration. Empirical research and debates about CEO duality create mixed results. There is no universal optimal board leadership structure that fits most of the firms (Lam & Lee, 2008, p.301). Given the background of worldwide increase in shareholder activism and widespread acceptance of CG practice internationally, academics and regulatory authorities in China and Hong Kong tend to recommend independent leadership of corporate boards (Lam and Lee, 2008; Peng et al., 2007).

## **2.3 MAINLAND CHINESE FIRMS**

### **2.3.1 Introduction**

This section describes the history of the recent development of the Mainland corporations and their background as SOEs. In particular, the listing and characteristics of the Mainland corporations listed in Hong Kong are described to highlight the difference between the two groups of H-shares and Red-chips of Chinese firms.

### **2.3.2 Background of Chinese Companies**

China launched its economic reform in the 1970s. It began by opening up its door to foreign trade and permitting entrepreneurs to build their businesses. Over the past three decades, The Chinese Government has been cautiously following a progressive privatisation strategy of SOEs while maintaining control through its assets management system (Ramamurti, 2000; Tian and Lau, 2001). Traditional 100 percent SOEs were transformed to joint-stock enterprises in the 1990s (Cull and Xu, 2005; Xiang, 1998). Joint-stock corporations are the only companies allowed to list their shares publicly, but most of them are still government controlled (CSRC, 2004). The old SOE becomes the sponsor of the listed firm and they remain actively involved with one another in business transactions like rental of production facilities or land (Tian and Lau, 2001). The Chinese Government's "state assets management bureaus" also appoint directors, mostly previous government officials, to the corporate boards, to supervise the huge amount of state assets distributed in the large number of SOEs. As a result, these firms have to accept frequent Government intervention in commercial matters as their boards are filled with large numbers of stated-related directors. A HK-listed Mainland corporation is loosely defined as a public company listed on the HKEx with over 50% of its sales revenue derived from Mainland China (HKEx, 2010b). In the late 1980s and 1990s, China actively restructured the debts of the SOEs, preparing them for large-scale privatisation (Tian and Lau, 2001). Hong Kong as the international financial hub and the sovereign territory of China played a pivotal role in the raising of capital for the Chinese enterprises in the early days. The number of listing increased rapidly after of the return of the British Colony to the PRC government in 1997. In 2010 alone, there were 106 Chinese companies newly listed on the main board, making Hong Kong the world number one stock exchange in

fund raising consistently for two years running - 2009 and 2010. The growing importance of Chinese companies in the Hong Kong stock market is reflected in their large number of listing, which has since risen rapidly to 526 on the main board in 2010 with a year-end market capitalisation of US\$668 billion (HKEx, 2010b). They represent a significant portion of the 1,244 stocks on the main board with total market capitalisation of US\$2.702 trillion at the end of 2010, ranking sixth in the world.

### **2.3.3 Listing of Chinese Firms in Hong Kong**

The market capitalisation of the Hong Kong stock market is relatively high for a small territory because it serves both economies of Hong Kong and the Mainland. There are slightly different listing rules applying to the two groups of Mainland-registered and Hong Kong-registered Chinese companies (Zhang, 2008). According to HKEx, these Hong Kong-listed China-controlled firms derive over half of their sales from China compared to the Chinese firms listed on the Mainland. Chinese firms listed in China and traded by Chinese citizens are called A shares companies, whereas, stocks for foreign trading within China are named B-shares. These shares are traded on the Shanghai and Shenzhen Stock Exchange with a sizeable market capitalisation. The value of the Shanghai Stock Exchange alone was US\$2.717 trillion in Dec of 2010 (SSE, 2011). The A-shares grow much bigger than that of the HK-listed H-shares and Red-chips. According to Zhang (2008), the median sales revenue of HK-listed H-share and Red chip companies is larger than that of their Mainland A-share counterparts, but they are less profitable with lower PE and PB. There are 128 H-share, 97 Red-chips and 301 non H-share Mainland private enterprises (NHMPes) out

of the 526 Mainland corporations (HKEx, 2010b). Their number accounted for 42% of a total of 1,252 listed companies on the Main Board of Hong Kong.

At the beginning, most Hong Kong-registered Chinese firms went public through back-door listings on the HKEx in the early 1980s. These enterprises are typically under the direct control of the Chinese State and Provincial government. This wave was started by China International Trust and Investment Corporation (CITIC) buying a significant share from the major shareholders of Ka Wah Bank as a listed shell of HKEx in the mid-1980s.

Tsingtao Brewery was the first company incorporated in China, which obtained a proper placing on the HKEx by IPO in 1993. This started a new wave of IPOs of leading Mainland firms in major industries like PetroChina, China Mobile, China Eastern Airlines and Huaneng Power in Hong Kong, which continued during the 1990s. The listing of these Mainland-incorporated firms in Hong Kong requires special approval by the China Securities Regulatory Commission (CSRC).

#### **2.3.4 Comparison of H-share and Red-chip Chinese Companies**

The total market capitalisation of Growth Enterprise Market (GEM) was relatively small (US\$8.5 billion) at the end of 2004 (HKEx, 2005c). There were 37 H-shares listed on the GEM Board. On the other hand, the total number of companies listed on the Main Board was 892 with 72 H-shares. The Main Board companies had a total market capitalisation of US\$849 billion on 31 December 2004 (HKEx, 2005c). Their

year-end market capitalisation constitutes a total of more than 50% of that of the Main Board (Lee and Poon, 2005).

H-shares are Chinese firms incorporated in the Mainland and are approved by CSRC and HKEx for IPO and listing in Hong Kong. The letter H refers to Hong Kong. Under PRC law, the shares listed on HKEx are allotted by a Mainland issuer and the par value of these H-shares is denominated in Renminbi (RMB); their financial statements are prepared also in RMB, yuan. On the other hand, their shares are subscribed and traded in Hong Kong dollars (HKEx, 2005c). Similar to their Chinese counterparts, only the portion of H-shares held by the public can be traded whereas the State portion is tightly controlled and remains non-tradable to prevent privatisation of State Enterprises.

A Red-chip company is a Chinese-controlled firm incorporated internationally outside Mainland China and listed in Hong Kong. The word red stands for “red China” (De Trenck et al., 1998). By the HKEx definition, a Red-chip is China-controlled either with at least 30% of shareholding in the hand of PRC governments (disregarding the level of control by the State, provincial or municipal entities), or with at least of 20% shareholding held by Chinese government-controlled entities that have strong influence on the company’s BODs.

Red-chip companies are generally not allowed to trade on the Chinese A-share market of the Shanghai Stock or Shenzhen Stock Exchanges, under current rules and regulations. According to statistics from the HKEx, there were 92 Red-chip companies listed on Hong Kong's main board and listed in the city's GEM as of June

30, 2010. Many leading companies, such as China Insurance, China Mobile and China National Offshore Oil Corporation (CNOOC) are representatives of the Red-chip Mainland firms. In many ways, they behave like local listed-companies with all of their shares tradable on the stock market. This increases the transparency of share transfer, resulting in lesser distortion of price (Wei, 2003).

The H-share and Red-chip firms of the final sample before 2005 are controlled by Chinese entities with the local or central Chinese government or as the largest shareholder (Gunasekarage et al., 2007). Similar to H-shares, Red-chip Chinese firms are traded on the stock market in the local Hong Kong currency, but their financial statements are tabled in the same Hong Kong dollar. This major difference is important in explaining some of the discrepancies of the empirical findings in Chapters Four and Five.

In general, H-shares have higher sales revenue, profitability, PB and PE ratios than locally listed Red-chip Chinese firms. Recently, their distinctions have become blurred. The full sample of the dissertation is comprised of H-shares and Red-chips. Consequently, they are treated as a whole group and because of their differences, they are also studied separately in sub-group analysis.

## **2.4 CORPORATE GOVERNANCE IN HONG KONG**

### **2.4.1 Corporate Governance and Code Provisions of Hong Kong**

Due to its Commonwealth legacy, Hong Kong's code of practice has been following closely that of the UK. The large number of business scandals in UK has led to the formation of the Cadbury committee to investigate the weakness of business conduct in the late 1980s (Boyd, 1995). The apparent lack of corporate governance structure over the power of BODs and board operations was blamed for the poor control of corporation (Cadbury Committee, 1992, p.15). It is recommended reducing the power of executive directors on one hand, and encourages a more active role for auditors and non-executive directors on the other (Boyd, 1995). As a British colony before 1997, Hong Kong and its regulatory bodies under the heavy influence of British administration, took up most of the recommendation of the Cadbury report regarding CG practices (Lam & Lee, 2008, p.299).

As a result of the Asian financial crisis in 1997, significant changes in the Hong Kong code of CG have been mandated by the HKEx over the past decade. Accounting standards are internationally recognised and legal protection is becoming quite strong with overall infrastructure in the Hong Kong market being conducive to achieving international standards (LLSV, 2002). The Code Provisions 2004 of Hong Kong was introduced by the HKEx with the aim of further strengthening Hong Kong's position as the leader in the area of corporate governance. Indeed, Hong Kong often ranks high on the list of CG amongst Asian countries, achieving close to the international

benchmark with respect to policy (ACGA, 2007). However, its practice is variable. The unique regulatory and institutional environment of Hong Kong has to be taken into account when the local picture of CG is discussed. In Hong Kong, most listed firms are incorporated overseas. This poses a challenge for regulatory authorities because most of the provisions of the Hong Kong Companies Ordinance like financial disclosure and connected transactions do not apply. There is high shareholding concentration of over 85% of listed firms in the hands of a few majority shareholders, either controlled by families or by the Chinese government (Lam and Lee, 2008). As a result, takeover activities are minimal in Hong Kong with most listed companies under the firm hands of their majority owners.

Compared to the UK and US, local shareholder apathy is obvious as reflected by the lack of monitoring from institutional investors with a high degree of organisation and shareholder activism. There is little organised investor activity to pressure companies into maintaining transparency and refraining from stripping away company assets through related-party transactions. There is a general lack of resources for enforcement by HKEx and the Securities and Futures Commission (SFC) (OUHK Video, 2005). The extremely high legal costs in Hong Kong are also discouraging investors from taking legal action against firms. Due to the high concentration of ownership in the firm hands of the Chinese government or families, hostile takeovers and market force are relatively weak to drive badly managed companies out of the market.

Hong Kong as one of the top financial centres of Asia is not short of capital to fuel the large number of public placement of Mainland Chinese firms, which increased



significantly over the past two decades. On the other hand, the Chinese government actively pursues significant changes in the rules and guidelines of CG in China because more mutual provident funds (MPFs) and institutional investors, which tend to take a longer term view, are allowed to invest in Mainland companies through the Qualified Financial International Investors (QFII) scheme since 2002. These investors are interested in the management and CG of the invested firms. Nonetheless, QFII only accounts for a small portion of equity, less than 0.1%, compared to the Chinese stock market capitalisation value (CSRC, 2010).

#### **2.4.2 CEO Duality in Hong Kong**

Board independence is one of the cornerstones of corporate governance. Without independence, corporate governance and thus firm performance could be compromised. The market considers board structure and its independence as important (Ho, 2005). Nonetheless, independence does not guarantee director quality nor higher firm performance (Dalton and Dalton, 2005). Board independence is best reflected by the transparency of the selection process of board members and their leaders and its freedom from the undue influence of the management. The presence of CEO duality and the lack of a nomination committee could be detrimental to board independence. In fact, it is argued that a fundamental omission of the US Sarbanes–Oxley Act of 2002 was its inaction on the demand to split the roles of COB and CEO (Green, 2004).

The recommendation of the Code Provisions A.4.4 in the setup of an independent

nomination committee is well intended. However, CEO duality is likely to exert undue influence over the nomination of BODs, affecting its objectivity and effectiveness, and thus firm performance (Monks and Minow, 2004; Ruigrok et al., 2006). It is the roles of the Chair not only to provide additional talents and resources, but to act as a sounding board, to advise, monitor and evaluate the actions of the CEO bearing the interests of the shareholders in mind. It is difficult and often dangerous for a leader to wear both hats and question his or her own action. According to institutional theory, firms tend to comply only when they are legally required. In other words, it is necessary to legislate the requirement for an off-board nomination committee similar to that of an audit committee, to ensure a proper selection mechanism for BODs. Substance over form is equally important. The quality and transparency of the selection process, albeit of the managerial influence, is paramount to its outcome.

The prevalence of CEO duality is related to the corporate culture and legal requirement of the country. In the case of corporate leadership in the US, less than 10% of listed firms have true CEO non-duality (Brickley et al., 1997) as separation of CEO and COB is seen as a sign of weakness by investors (Carapeto, et al., 2005). This is in sharp contrast to the board arrangement in Europe, Russia and Malaysia where over 80% of listed companies have independent leadership (Abdullah, 2004; Carapeto et al., 2005; Judge et al., 2003). In Hong Kong, CEO duality is not uncommon amongst listed firms. Close to 37% of HK-listed companies do not comply with the Code Provisions requirement of HKEx on CEO non-duality (HKEx, 2010a).

### **2.4.3 Nomination Committee**

A nomination committee is technically an off-board committee with its decisions ratified by the board. It does not report directly to shareholders. It is generally accepted with empirical evidence that BODs are able to affect firm performance (Zahra and Pearce, 1989). On the other hand, a nomination committee is found to relate positively and significantly with corporate competitiveness (Ho, 2005). It helps mitigate managerial influence on the nomination and selection of directors. As a result, the asymmetry of power between BODs and executives is reduced. A U.S. study by Wallace and Cravens (1997) also confirms the importance of a nomination committee in improving firm performance of large public companies, using both market and accounting measures. However, combining the titles could affect the nomination process and hence the distribution of power between BOD and the CEO.

Twice as many non-family listed companies (12%) have a nomination committee than do family-controlled companies (6%) in Hong Kong (Lam & Lee, 2008). On the other hand, almost all the HK-listed firms studied have an audit committee as legally required by the listing rules of HKEx, but only 25 percent of them have a remuneration committee. Despite the HKEx recommendation of the establishment of a nomination committee for listed firms according to HK-CG Code A.4.4, the number of nomination committee is even fewer (9%) as it is not a statutory requirement.

“Issuers should establish a nomination committee. A majority of the members of the nomination committee should be independent non-executive directors” (HKEx, 2005b, p. A14-7).

This is in line with the institutional theory that firms tend to do the minimum to satisfy the legal requirement. However, the absence of a nominating committee does not have a significant effect on the level of discretionary dividends as echoed by the study of 23 countries over the relationship of corporate governance and performance (Gupta, 2011).

#### **2.4.4 Corporate Governance of HK-listed Chinese Enterprises**

In the past couple of decades, the Chinese government was determined to build a corporate system to protect minority shareholders (Zhang, 2008). Mainland is improving its regulatory and corporate governance systems at a fast pace. It has been rapidly developing a large number of regulations that are, in many cases, stricter than those of Hong Kong (Zhang, 2008). In contrast to the common law system of Hong Kong, China adopts the code-law system, which is often criticised for its poorer protection of outside shareholders (La Porta et al., 2002). This is further constrained by the lack of intermediary institutions and the absolute control of sensitive financial and political information by the State. There is a general lack of board independence amongst Mainland firms (Liu, 2005). In contrast to the market orientation of the West, a control-based model of governance practice is usually adopted by the Chinese firms (Liu, 2006). As a result, China is often rated poorly near the bottom of the annual Asian corporate governance ranking, evidencing its poorer CG practice (ACGA, 2007).

Recent studies by Claessens et al. (2002) and Gompers et al. (2003) support the view that CG helps lower the cost of capital, offers better access to financing, attracts professional managers and increases a firm's financial return by as much as 8.5%. For Mainland firms, only the top-tier, well-managed companies in China are selected for listing in Hong Kong. They tend to have a relatively good CG structure and practice in place. They also have individual and institutional investors. State ownership has gradually been reduced. Nevertheless, institutional investors are still cautious of the management practice and CG of Chinese firms as evidenced by the study of Cheung et al. (2007). These overseas Chinese enterprises share similar characteristics of governance structure with their Mainland counterparts, i.e. the existence of a supervisory board (Liu, 2005) and the lack of executive ownership. As suggested by Jensen and Meckling (1976), higher firm performance could be achieved by offering executives higher levels of financial incentives. However, the compensation scheme for the Chinese CEOs or COBs are far behind those in developed countries. They have much less financial incentive tied to firm performance (Zhang, 2008).

China is considered an engine of growth for Asia, accounting for half of the export growth of Hong Kong, Japan and Taiwan (Bransetter, 2008). There were an estimated 13,000 Chinese enterprises overseas in 177 countries by 2009 (Quer et al., 2011). Despite a more transparent and efficient CG environment and the adoption of a market orientation, Chinese companies listed overseas do not offer an improved corporate governance practice (Dong and Xue, 2009). Indeed, the overseas Chinese firms, especially those in Northern America, are under serious attack because of their apparent lack of transparency and weakness in governance practice. The use of

Chinese auditor firms is of particular concerns to the investment communities in the West. There have been numerous studies on the relationship of CG and firm performance (Bhagat and Bolton, 2008; Liu et al., 2012). Gompers et al. (2003) pioneered the first empirical research on the relationship between governance index and firm value. They constructed an investment strategy of buying shares of well-governed firms and selling those of poorly-governed firms. This trading strategy yields 8.5% abnormal returns per year. Some criticisers of the lack of CG of Chinese firms, e.g. Muddy Water Inc., even adopt a short position to make a profit out of their critical reports attacking these firms. They take advantage of the high valuation of Chinese firms in the midst of the 'Chinese hype' built up over recent years. As a result, the investment communities are taken back as they know little about the operations of these companies in China.

Chinese companies listed in Hong Kong tend to have a higher incidence of CEO duality, more managerial participation and thus influence compared to their Mainland counterparts (Zhang, 2008). Even though both groups have the Chinese government as the major shareholder, HK-listed Chinese companies appear to have more concentrated ownership. With increased media and public scrutiny, regulatory and academic pressure, Chinese corporations started to abandon duality and separated CEO and chairperson roles from approximately 40% in the early 1990s to 70 percent within the decade (Bai et al., 2004).

The on-going CG reform in China follows the Anglo-American model in the joint-stock corporations to enhance their board independence. Their practice and philosophy is consistent with agency theory. However, in the background of a

collectivist cultural context and transition economy framework (Tam, 1999), the 403 Chinese SOEs analysed from 1992 to 1996, are found to show a positive relationship between firm performance and CEO duality (Peng et al., 2007). Stewardship theory with its root in social and psychological dynamics of board-management relationships appears to be an appropriate theoretical construct for explaining Chinese CG practice. There is a middle ground of having CEO to act as vice-chair of the board as proposed by the Chinese academics (Yu, 2009). The influence is still there, but it is nevertheless smaller. This could help keep the 2-tier structure intact without upsetting the morale of the CEO.

#### **2.4.5 Global Financial Crisis and Firm Performance**

Global financial crisis is a sudden external event that challenges the resilience and adaptability of corporate governance to the unpredictable downturn. The Asian financial crisis in 1997 prompted governments in the region to uplift their requirements on the practice and structure of CG (Lemmon and Lins, 2003). Indeed, the experience provides good lesson for Asian governments and firms and helps prepare them to deal with the GFC. The serious economic downturn could magnify some of the major weaknesses in the local CG practice that are more susceptible to the changes in external environments (Baek et al., 2004). Investors often pay particular attention to corporate governance issues as they expect firm performance to fall (Mitton, 2002; Rajan and Zingales, 1998).

Boyd (1995) identifies that CEO duality is associated with firm performance under different organisational environments. Duality is preferred in turbulent and complex circumstances (Tan et al., 2001). Daily and Dalton (1994) also report a positive correlation between dual leadership and bankruptcies. On the other hand, firms perform better in turbulent environment or rapid growth if they could have access to more key resources by having both CEO and COB, according to institutional theory. This is in support of non-duality for firms in complex environment.

State ownership helps to mitigate severe financial constraints during a financial crisis (Kuppuswamy and Villalonga, 2010). During financial crisis periods, companies tend to suffer from severe shortage of credits and loans, and they may have to forgo attractive investment projects (Campello et al., 2010; Ivashina and Scharfstein, 2010). State-owned banks may provide loans to SOEs to meet their political agenda (Din, 2005). In addition, Lu et al. (2005) argue that the State acts as an implicit guarantor for the debts of SOEs. As a result, Chinese SOEs could receive preferential treatment and access to bank loans, obtaining a disproportionately large share of the credits (Allen et al., 2005; Liu, 2012). This could mitigate the acute financing constraints that plague firms during the GFC. All in all, state ownership potentially has positive effect on firm performance of the Chinese SOEs during a financial crisis.

## **2.5 SUMMARY**

The practice of good CG is a means to increase the stakeholder value of a firm. Good corporate governance is expected to start in the boardroom with directors. Corporate



leadership is an important element of CG, which is crucial to the success of any firm in today's competitive market and ever-increasing pressure to deliver performance. Amongst the key theories, neither agency approach nor stewardship principle could adequately explain the conflicting results of the impact of corporate leadership structure on firm performance. Recently, contingency perspective on environmental dynamism and resource scarcity has become of particular interest to explain the results.

China is emerging with its firms achieving some of the world's largest market cap. Its growing influence in the region is widely regarded as the engine of growth. The general lack of research on the corporate governance of these Chinese firms is worth investigation. The unquestioned adoption of Western management practice may not necessarily do justice to the unique business environment, corporate ownership and cultural context of the emerging Mainland Chinese firms in transition (Nowland 2008; Peng et al., 2007).

The conflicting theories and inconsistent empirical results of research of the impact of CEO duality on firm performance over the last few decades require further probing into the direction of causality amongst the variables. Above all, there are only a small number of studies on rapidly emerging Chinese firms (Peng et al., 2007), which do not represent all the costs and benefits to the firms. This study attempts to fill this gap by obtaining a more recent picture, measuring the accounting ratios and economic contributions of the corporate leadership for Mainland companies in Hong Kong (Cheung et al., 2005; Lam and Lee, 2008).

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This study intends to construct a set of measures based on financial indicators of operating performance and market valuation proposed by Cheung et al. (2007) and Lam and Lee (2008), to study the relationship between corporate leadership structure and performance of the Mainland firms listed in Hong Kong. It attempts to identify differences prior to, and after, the recommendation on the separation of the roles of CEO and COB as stipulated by the Code Provision A.2.1 of Hong Kong Exchanges and Clearing Ltd (HKEx, 2005b).

Recent corporate governance studies advocate contingency theory, which suggests the relationship between CEO duality and performance as contingent on a number of internal and external factors, such as firm characteristics, corporate governance, industry, environmental dynamism, turbulent circumstances of financial crisis and resource scarcity (Boyd, 1995; Kwok, 1998). The Global Financial Crisis (GFC) since 2007 has hit the world economy hard. It is thus the intention of the research to contribute to the literature by studying the impact of the GFC on the relationship between CEO duality and firm performance for Hong Kong listed Chinese companies.

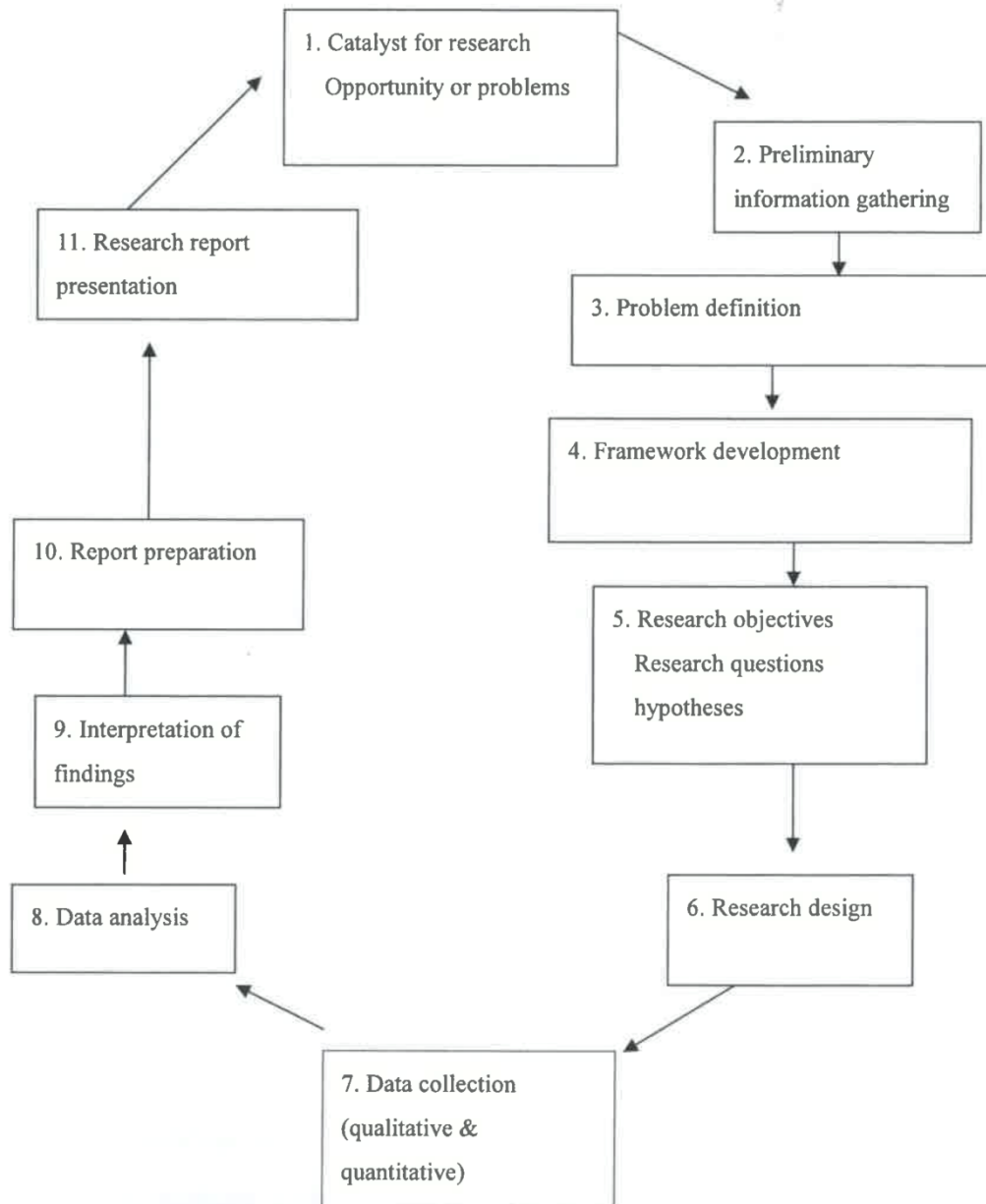
This chapter covers the research paradigm, design and process that are adopted in the dissertation. A number of research questions on CEO duality and firm performance are put forward with corresponding hypotheses. Firm characteristics and industry types are used as control variables to isolate the partial effect of CEO duality on firm performance. The possible moderating effect of the GFC on the relationship between corporate leadership structure and firm performance is also tested. Secondary data for the Chinese firms listed on HKEx are collected from annual reports and Thomson Reuters DataStream and used in this study, and hence ethics approval is not required. Data are analysed using descriptive statistics, t-tests for differences in means and multiple regression models, hypotheses are developed using appropriate test statistics. Data sources, variable definitions and data analysis techniques are discussed in this chapter.

### **3.2 RESEARCH PROCESS AND DESIGN**

This dissertation adopts a positivist research paradigm, which is deductive in nature and combines with empirical observation and statistical analysis (Fossey et al., 2002). Its assumption of universal laws governing social events encourages the uncovering of such laws that will help control or predict social phenomena. In line with a positivist research paradigm, quantitative methods are used to predict variables and test hypotheses compiling quantifiable information. A statistical approach is employed to explain how leadership structure is related to performance of Chinese firms. Secondary data collected from annual reports and public domain of the Chinese firms listed on HKEx are used for the research, and hence ethics approval is not required.

### **3.2.1 Research Process**

Cavana et al. (2001, p.77) suggests an eleven-step business research process (Figure 3.1), which is a useful reference for this dissertation. The non-compliance reports of the HKEx over the years is a catalyst for the preliminary search of information on some of the key issues of CG amongst the emerging Chinese firms listed in Hong Kong (Step 1). CEO duality tops the list of non-compliance of the HK-CG Code (HKEX, 2010a). Is there financial incentive for the resistance to comply with the Code Provisions? Does the recent GFC have any moderating effect on the relationship between corporate leadership and firm performance for this group of Chinese companies? Following a review of the literature, the research problem is defined (Step 3) and a conceptual framework (Step 4) is identified. The research questions, hypotheses and appropriate design are then formulated (Steps 5 and 6). Data collected from the public domain (Step 7) are analysed and interpreted (Steps 8 and 9) using regression analyses. Finally, the empirical results are presented and interpreted (Steps 10 and 11).



**Figure 3.1** The Business Research Process Suggested by Cavana et al. (2001, p.77)

### 3.2.2 Research Design

According to Cooper et al. (2006), a properly designed research includes some of the key elements as follows,

A plan that is either activity-based or time-based;

Research questions are the central factor that substantially influences the plan;

The plan is a guide for selecting resources and types of information to be collected;

The plan is a procedural outline for research activities;

A framework that specifies the relationships amongst the variables under study.

There are elements of this research that meet some of the requirements of a proper design plan:

i). The type of research

Research questions could be crystallised to different degree. The study could be either explanatory or formal in nature. This is an academic research dissertation. It is structural, and thus a formal study. It aims to provide answers to the selected research questions.

ii). The purpose of the research

Descriptive and causal are the two major purposes for research. This research is a causal study of the relationships between variables of CEO duality and firm performance.

iii). The method of data collection

Monitoring and communication studies are the two common methods of data collection. This research uses secondary financial data without eliciting responses from the research subjects, as communication does. It is thus a monitoring study.

iv). Power of researcher over the studied variables

This research uses secondary data from annual reports and DataStream, which are publicly available. There is no control or influence from the researcher over the variables.

v). The time aspect of research

This research aims to study the effect of leadership structure on firm performance over the period of 2004 and 2010. It is a longitudinal study to observe if there is any change in the relationship between the variables before and after the implementation of the HK-CG Code and the current GFC. The period of 2003 is excluded because of the epidemic of the Severe Acute Respiratory Syndrome (SARS) in Hong Kong and in China, which caused huge economic loss to businesses.

The major considerations that guide the research design are adoption of a conceptual perspective to the effect of CEO duality on firm performance; and adoption of the regression technique so as to construct an empirical model delineating the relationships between the outcome variables of operating performance with other interacting environmental factors and firm characteristics. The research is carried out in two stages by conceptualising variables for the build up of a research model. The second stage involves estimation of the regression models and hypotheses testing.

### **3.3 RESEARCH QUESTIONS AND HYPOTHESES**

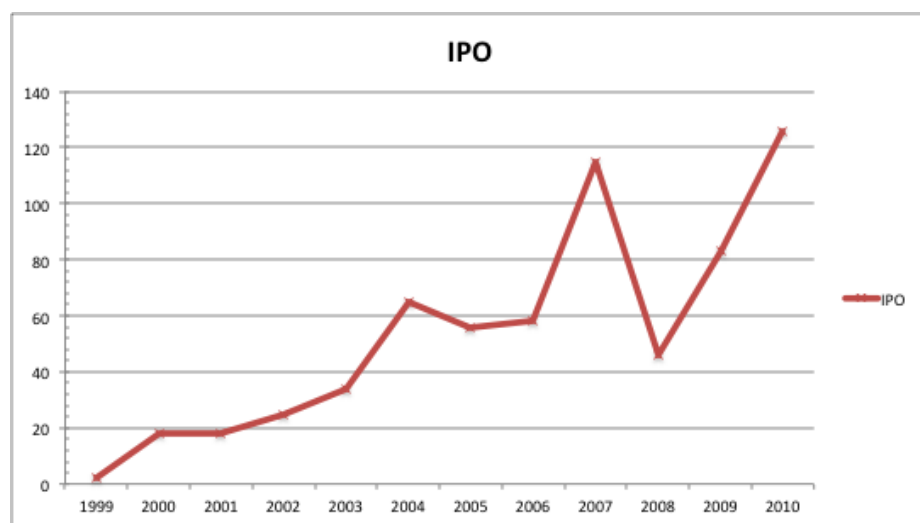
#### **3.3.1 Research Questions**

Corporate leadership is a key success factor for firms. The objective of this dissertation is to study the effect of leadership structure on firm performance, which may also be contingent on firm characteristics or environmental factors. There are currently two types of board leadership: a board with separate CEO and COB and one with CEO duality – where both roles are played by the same person. In general, regulatory authorities hold the view that CEO duality could be plagued with agency problems. They prefer separate leadership roles of listed firms for better internal monitoring and hence protection of the interest of stakeholders. But, the results on the impact of CEO duality on firm performance have been mixed. Splitting the leadership roles does not necessarily lead to better firm performance. In Hong Kong, over one third of the listed firms continue to maintain CEO duality in spite of the requirement of provision A.2.1 by the HK-CG Code, to separate the two titles since 2005 (HKEx, 2005b). This consistently represents the number one non-compliance of the HK-CG Code, over the years since its introduction (HKEx, 2010a). Why would these firms resist the change? Are there economic rationales for their decision?

Companies started formal listing in Hong Kong in the late 19<sup>th</sup> Century. Previous studies suggest that companies listed in Hong Kong are largely family-owned, and CEO duality is common amongst them (Cheung et al., 2007; Lam & Lee 2008). On the other hand, Chinese firms started to go public in Hong Kong in the early 1990s



with Tsangtao Beer (SEHK 0168) as the first Mainland entrant. Most HKEx-listed Mainland Chinese firms are usually SOEs with significant state ownership. They have been consistently separating their leadership titles over the years (Zhang, 2008). Only a small number of privately-owned Chinese companies (non-SOEs) were listed in Hong Kong and overseas before 2000, but their IPO number has increased over 300 fold, from 2 in 1999 to a total of 646 (Figure 3.2) by the end of 2010 (Li et al., 2011, p.15). These non-SOEs do not have to undergo the intense government scrutiny and there have been a number of scandals that tainted investor confidence. Their founders often hold the executive Chair position with a significant stake in the company. Do they tend to wear both hats of the leadership?



**Figure 3.2** The number of IPO of Chinese Enterprises outside of Mainland China between 1999 and 2010

The increasing presence of Chinese firms in the global economy and the lack of research on their CG practice prompt researchers to study the important CG practice in their boardroom (Peng et al, 2007). This dissertation would like to find out if there

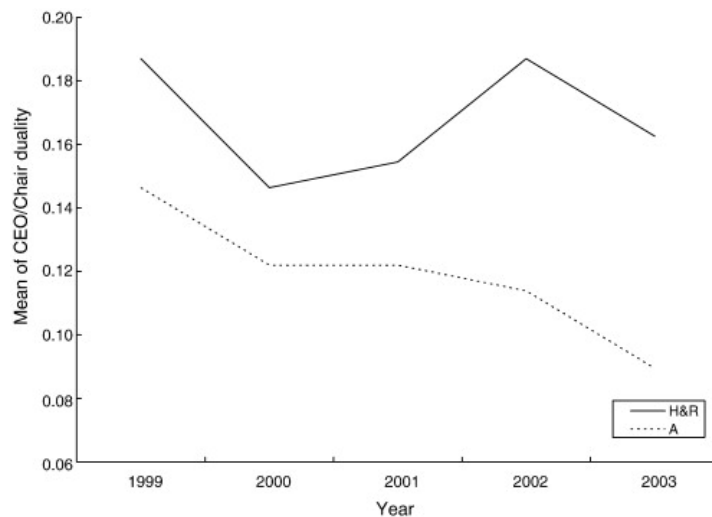
is any preferred choice of leadership structure amongst these Chinese companies for the period of 2004 – 2010, prior to, and subsequent to, the implementation of HK-CG Code in 2005. Is their choice of leadership structure based on a rational decision on financial considerations of better firm performance, or on compliance with legal recommendation, as suggested by institutional theory (DiMaggio and Powell, 1983)? Or is it simply a tendency to maintain the status quo for the protection of the vested interest of the entrenched CEO? Thus, the following research questions are presented:

Large numbers of listed firms keep their duality structure unchanged years after the introduction of HK-CG Code. Without prior knowledge or solid evidence of one leadership structure outperforming the other, do these firms choose their leadership structure based on performance considerations? However, the Mainland-listed Chinese firms, yielding to the lobby of the public and investment communities and pressure from media and regulatory bodies, are opting out of CEO duality (Bai et al., 2004; Peng et al., 2007; Yu 2009; Zhang, 2008). The incidence of separation of CEO and COB rose from 40% in early 1990 to 90% by 2003. It is unlikely for the large number of firms with split titles to revert to CEO duality except in the rare case of a sudden departure or termination of either CEO or COB. Even though the founders of most non-SOE Chinese firms remain as executive COB, they could still dominate the board and drive their agenda without the need to take up the role of CEO, because of their substantial shareholding. Only 17% of HK-listed Chinese firms (Figure 3.3) had CEO duality by 2003 (Zhang, 2008, p.447) compared with 37% of the surveyed figure of listed companies in Hong Kong (HKEx, 2010a). Is there a downward trend for the period of 2004 – 2010? Do the Chinese firms choose to split their leadership

structure out of compliance of regulation? Is there an association between CEO duality and firm performance? What is the direction of the relationship?

According to contingency theory, the relationship between corporate leadership and performance is moderated by a large number of internal and external factors of firm specific characteristics and forces that shape the competitive environment.

The subprime mortgage crisis seriously affects the global economy. It is thus the main objective of this study to find out if the relationship between CEO duality and performance of the HK-listed Chinese firms is moderated by the recent Global Financial Crisis. Do the firms with CEO duality have greater or less fluctuation in performance, and hence business risk, during the period of the GFC?



**Figure 3.3** The occurrence of CEO duality amongst H-share and Red-chip firms listed in Hong Kong vs. that of A-shares listed in Mainland China (Zhang, 2008, p.447)

### 3.3.2 Hypotheses

Since its implementation of the HK-CG Code in 2005, CEO duality has consistently topped the list of non-compliance at 37% for the sample firms. Is there a financial benefit for firms to keep their duality structure, in spite of the requirement of the Code Provisions? The literature suggests three alternative hypotheses in relation to the effect of CEO duality on firm performance to address this research question.

Institutional theory suggests that CEO non-duality and the growing number of external directors stems from pressure to comply with regulation. Investors are putting pressure on firms to raise their level of CG. At the end of the day, it is the Government and regulators who drive important changes in the practice of CG. This is a top-down model pushed by listing requirements, which may not necessarily lead to higher firm value (DiMaggio and Powell, 1983). Separation of the titles may not be an effective means for controlling agency costs because of extra information sharing costs and financial costs associated with CEO non-duality. Entrenched CEOs have significant power over the board to moderate the control efforts. If costs outweigh benefits in separating CEO and COB, one would expect no effect of CEO duality on performance. More specifically, the hypothesised relation can be expressed as follows:

H<sub>N,1</sub>: CEO duality does *not* affect firm performance of the HK-listed H-share firms.

Stewardship theory maintains that CEO duality helps provide a single central focus of corporate leadership, promoting stability and effective communication within the board and amongst senior management (Stoeberl and Sherony, 1985). This argument

is echoed by the studies of Donaldson and Davis (1991) and Brickley et al. (1997). Their results run contrary to the negative findings of CEO duality on firm performance in earlier studies.

The CEO has intimate knowledge of the business, thus duality enables the making of snap decisions in the midst of a dynamic competitive environment (Brickley et al., 1997). The contingency theory, as favoured by most recent Chinese studies, is also in support of the economic benefits of CEO duality (Peng et al., 2007; Yu, 2009). Peng et al. (2007) analyse 403 Chinese state-owned enterprises listed in China between 1992 and 1996 with 1202 company-years, and find a positive relationship between firm performance and CEO duality. Yu (2009) concludes with similar findings using more recent data of 2002-2003 for public Mainland enterprises listed in China. Indeed, a chairperson brings in both additional cost and benefit. There is also agency cost of the COB, information sharing cost between the CEO and the COB, and cost for the loss in CEO flexibility. It may reduce firm performance because of information asymmetry (Bruce, 2010). It is thus hypothesised that:

H<sub>1</sub>: CEO duality *positively* affects performance of the HK-listed Chinese firms.

Agency theory, on the other hand, recommends the separation of leadership structure to minimise the agency cost of an over-powering CEO (Daily and Dalton, 1994; Pi and Timme, 1993; Rechner and Dalton, 1991). This is in line with the principle behind the Code Provision A.2.1.

“There should be a clear division of these responsibilities at the board level to ensure a balance of power and authority, so that power is not concentrated in any one individual” (HKEx, 2005b, p. A14-3).

Firms compete for limited resources. Resource-dependency theory highlights the competitive advantage of possessing critical resources like talents, finance, distribution and network (Pfeffer, 1972). With two top-level leaders focusing on different areas of key success resources, firms are likely to fare better. This is against duality, especially for companies with industry and firm complexity. This theory offers a contingent aspect of environment complexity and resource scarcity to board size and CEO duality.

In addition, a board Chair could help enhance the business network, reduce risk in decision-making and, above all, mitigate agency cost of an over-powered CEO. Both longitudinal studies of Carapeto et al. (2005) and Rechner and Dalton (1991) confirm a positive relationship of non-duality with performance. It is hypothesised that board leadership structure, amongst all the factors, is particularly important to the sizeable scale and complex scope of business of listed firms in delivering firm performance.

H<sub>A,1</sub>: CEO duality *negatively* affects firm performance of the HK-listed Chinese firms

The responsibility of delivering firm performance and value falls upon the board and the leaders. An optimal leadership structure could help promote growth and reduce firm risk in financial crises as shown in the study of 19 emerging countries by Ezzine and Olivero (2011). Resource-dependency theory suggests firms could perform better

with two top-level leaders focusing on different key resources at times of turbulent environment with resource scarcity. Firms in the midst of environment dynamism or rapid growth during their early stage of development could outperform others if they tap into more key resources. Indeed, having a separate COB handling the challenge of a different role allows the CEO to focus on the operation of the business in any crisis.

There is also positive association between CEO duality and firm bankruptcies, as suggested by Daily and Dalton (1994). CEO duality tends to reduce firm performance and increase risk. As a result, CEO duality is often blamed by the media and the public at times of corporate scandals. This widely acknowledged view encourages government bodies and regulatory authorities to adopt an increasingly protective role (Ramdani and Witteloostuun, 2009), requesting the separation of CEO/COB. Yu and Yang (2011) observe a negative impact of financial reforms on the relationship between CEO duality and firm performance in countries with easy access to financial supports from banks. Does CG and separation of the leading titles help reduce performance volatility and mitigate the spread of the crisis as suggested by Ezzine and Olivero (2011)?

H<sub>2</sub>: Global financial crisis *negatively* moderates the relationship between CEO duality and firm performance.

In contrast, CEO duality as favored by stewardship theory is found to be of positive value in a turbulent economic environment. During the measured period of 1995-1997, strong leadership improves Tobin's Q of Singapore listed companies in 1997 with the Asian Economic Crisis (Tan et al., 2001). There is a positive correlation of bank crisis

with the relationship of CEO duality and firm performance in a developed economy. But the eruption of the Asian financial crisis took place at the latter half of 1997. The full force of disruption may not be fully reflected in the financial year of 1997. The subprime mortgage crisis may display similar characteristics as it intensified by late 2007. Indeed, the crisis by October 2008 had erased around US\$25 trillion from the value of stock markets (Naudé, 2009). It is thus recommended to observe the longitudinal effect of the GFC over a period of 3 years up till 2010. The result of 2008 is likely to differ from that of 2009 and 2010 when governments worldwide subsequently injected large sums of money into the financial market to improve its liquidity and lending.

This empirical research covers the period of the current global economic recession. This gives the researcher a chance to measure how the Chinese firms stack up during the GFC, which adversely affected the World economy. Hence the second set of hypotheses is made:

H<sub>A,2</sub>: Global financial crisis *positively* moderates the relationship between CEO duality and firm performance

The proposed hypotheses test the direct causal relationship running from leadership structure to firm performance. In summary, the preceding discussion suggests that the direction of the CEO duality effect is a priori indeterminate.





### 3.4 VARIABLES

The variables used in this study are listed in Table 3.1 with details of their data source and data codes (Table 3.2). In addition to firm operating profit, this research also uses earnings before interest, tax and depreciation (**EBITDA**), market-to-book value of equity (**MTBV**), return on total assets (**ROA**) and return on equity (**ROE**) as measures of firm performance and value, as adopted by Lam and Lee (2008).

<b>Variables</b>	<b>Definition</b>
<b>Dependent variables</b>	
EBITDA	Earnings before interest, tax and depreciation
MTBV	Market-to-book value of equity
ROA	Return on total assets
ROE	Return on equity
<b>Independent variables</b>	
CR	Current ratio (current assets over current liabilities)
DE	Debt-to-equity ratio (long-term debt over common equity)
DUAL	CEO duality (1 for duality, 0 otherwise)
GFC	Global financial crisis (1 for existence, 0 otherwise)
GFC_DUAL	Moderating variable of GFC on CEO duality (product of GFC and CEO duality)
HIST	Firm history (years of listing)
IND	Industry Type (1 for Financials, 0 for Others)
L_BSIZE	Natural logarithm of board size
L_MC	Natural logarithm of market capitalisation
L_NS	Natural logarithm of net sales
L_TA	Natural logarithm of total assets
NCOM	Nomination committee (1 for existence, 0 otherwise)

**Table 3.1** Definition of Variables

ITEM	Data source	Data code of World Scope
CEO Duality	Annual Reports	N/A
Board Size	Annual Reports	N/A
Firm History (years since incorporation) - Date of Incorporation	Hong Kong Companies Registry	N/A
Market capitalisation	Thomson Financial (Datastream)	WC08001
Net Sales	Thomson Financial (Datastream)	WC01001
Total Asset	Thomson Financial (Datastream)	WC02999
Current ratio (Current assets over current liabilities)	Thomson Financial (Datastream)	WC08106
Debt to equity ratio (Long-term debt over common equity)	Thomson Financial (Datastream)	WC08226
EBITDA	Thomson Financial (Datastream)	WC18198
ROA (Return on total assets)	Thomson Financial (Datastream)	WC08326
ROE (Return on Equity)	Thomson Financial (Datastream)	WC08301
MTBV (Market-to-book value of equity)	Bloomberg Financial	
DUAL - A binary variable. CEO duality = 1; otherwise = 0	Annual reports	N/A
NCOM - A binary variable. Nomination committee = 1 for existence; otherwise = 0	Annual reports	N/A
GFC - A binary variable. Global financial crisis = 1; absence = 0		N/A

**Table 3.2** Data Sources and Data Codes

Most of the financial variables like EBITDA, Total Assets, Total Liabilities and Net Sales of the annual reports of the Mainland Chinese firms are normally in RMB. However, the data obtained from DataStream International and Worldscope databases are already converted into Hong Kong Dollar using exchange rate from the Worldscope field, WC18214.

### **3.4.1 Independent Variables**

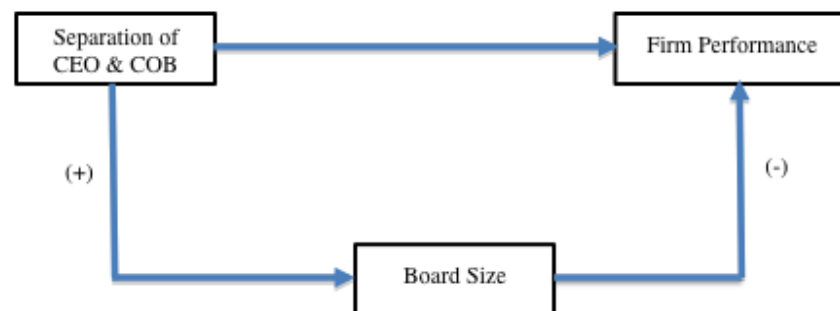
Contingency theory suggests that the relationship between CEO duality and firm performance is moderated by a host of endogenous factors (Figure 3.4): board size, firm history, firm size, minority and majority shareholder interest, firm leverage, family ownership and industry type (Lam and Lee, 2008), plus measures of firm performance and external environmental factors of firm affiliation and munificence (Boyd, 1995; Peng et al., 2007; Yu and Yang, 2011, pp. 15-16). Family ownership is not a characteristic for this group of Chinese companies as most of them are state-owned enterprises. Therefore, this research does not seek to identify their CEO and Chair to evaluate if they are of the same controlling family. A number of control variables are used to isolate the partial impact of CEO duality on firm performance. These variables are outlined below:

#### **i Board Size**

Numerous studies confirm the negative relationship between board size and firm performance (Ahmed et al., 2006; Bennesen et al., 2007). As a result of communication inefficiency, increase in board size is detrimental to monitoring, decision-making and hence firm value (Jensen, 1993). Directors tend to be less cohesive and participative when a board gets too big (Lipton & Lorsch, 1992). It is also less efficient because sharing information and building consensus become a daunting task in a larger board (Judge and Zeithaml, 1992). Its size is thus negatively associated with profitability and corporate performance of return on equity (Conyon and Peck, 1998, Yermack, 1996). Limiting board size helps increased monitoring and

improves firm performance (Andres et al., 2005; Eisenberg et al., 1998). It is found that boards with 6 to 15 directors have higher ROE and higher net profit margins (Brown and Caylor, 2004).

On the other hand, separation of the leadership roles will likely result in one extra member for the board. The increased board size could affect the regression analysis of the leadership structure and firm performance. This is significant for small board size. It is thus necessary to control the effect of board size, and it is best expressed as common logarithm of board size (L\_BSIZE) for a normal distribution. The data of board size is obtained from the annual reports of the Chinese firms.



Separation of CEO and COB increases board size, which will negatively impact firm performance

'+' denotes positive impact  
'-' denotes negative impact

**Figure 3.4** Effect of Separation of CEO and COB on Board Size and Firm Performance

## ii Firm History

Black et al. (2006) suggest that younger firms are faster growing while older firms are more likely to have finished their high-growth stage. As a result, younger firms, as measured by a shorter incorporation history, tend to have better growth properties and higher share price-earnings ratio. On the other hand, firm ownership may become more widespread over time, which could affect CG practices and performance (Yermack, 1996). Firm performance is thus contingent on its development stage (Yu and Yang, 2011).

Most firms exist for quite a while before their listing, and thus their date of incorporation could better represent their firm history. Instead of using listing date to work out firm history, this dissertation adopts the incorporation date as basis for calculation. However, many H-shares and Red-chips are incorporated in Hong Kong just prior to their listing. Date of incorporation data is not available from Thomson Reuters database. It is instead extracted from Hong Kong Government Cyber Search Centre of the Integrated Companies Registry Information System (ICRIS) website (<http://www.icris.cr.gov.hk>). Firm history (HIST) measured by the number of years, is then calculated from the date of incorporation.

## iii. Firm Size

It is expected that larger firms tend to achieve better performance by exploiting both, economies of scale and scope. Firm size can be measured by the book value of its market capitalisation, net sales or total assets. They are proxies that are correlated

with firm performance in a different manner (Yermack, 1996). However, earlier studies report inconsistent findings that firm performance is negatively associated with total assets (Cheung et al., 2004) and positively associated with both market capitalisation and net sales (Yermack, 1996). These indicators of firm size are all included in the regression analysis (Chen and Jaggi, 2000; Kiel and Nicholson, 2003). The market capitalisation is computed by multiplying the number of outstanding shares by price per share. It is expressed in units of thousands in Thomson Reuters database and in millions in Bloomberg database.

Earlier study of the Hong Kong capital market uses the common logarithm of market capitalisation and total assets of the sample, to reduce skewness of the corresponding distribution (Chan, 2001). In this study, firm size is measured by the common logarithm of market capitalisation (L\_MC), the common logarithm of net sales (L\_NS) and the common logarithm of total assets (L\_TA). The data is sourced from Thomson Reuters Financial DataStream. They are similar to those obtained from Bloomberg Financial for the purpose of validation.

#### iv      Liquidity and Leverage

Debt financing is inevitable in the business of listed firms. But, this often leads to external corporate monitoring by debt holders to protect their own financial interest in the firms (Chen and Jaggi, 2000). They are included as control variables (Cheung et al., 2004; Gul and Leung, 2004). The data of current ratio (CR) and debt-to-equity ratio (DE), is sourced from Thomson Reuters Financial DataStream. However, DE could not be directly accessed and it has to be calculated using Worldscope definition



from the data of Thomson Reuters (2010). As shown in section 4.3, leverage is expressed in terms of the common logarithm of current ratio (current assets over current liabilities) and common logarithm of debt-to-equity ratio (long-term debt over common equity), to ensure normal distribution.

## v Industry

The group of Chinese companies face similar external economic, cultural, legal and political macro-environments. But, firms operating in different industries may have very different value-creation business processes, competition and be subject to different Government policy. The impacts on CG by CEO duality vary across industries (Elsayed, 2007). It is therefore also important to control for their industry type. This study adopts the industry types classification of HKEx according to the Hang Seng Industry Classification System (HSICS) provided by Hang Seng Indexes Company Ltd. Groups (HKEx, 2011).

The banking and insurance industry has a very different financial profile of capital structure (Lam and Lee, 2008). They are subject to tight statutory and disclosure regulations and tend to have better corporate governance practices in place (Chen and Jaggi, 2000; Cheung et al., 2004). Gul and Leung (2004) suggest excluding them from sampling, but the financial banking and insurance industries are particularly useful to the study, as they are vulnerable to the volatile market and the change in liquidity during a credit crunch (Mishra and Nielsen, 2000). Therefore, industry group (IND) is treated as dummy binary variable of '1' for financial banking and insurance industry whereas '0' for the other groups of non-financial industry. It is considered as a control

variable for the empirical tests. Their industry classification details are extracted from the website of HKEx (2011).

vi. CEO Duality

CEO duality is the independent variable of our hypotheses. Its impact on firm performance was mixed in past studies. Consistent with earlier research, it is treated as a dummy variable (Daily and Dalton 1994; Lam and Lee 2008). To measure the dichotomous variable, a value of 1 (one) is assigned if the positions of the CEO and the board Chair of a firm are held by the same person, i.e., CEO/COB duality, and 0 (zero) otherwise. In other words, it is binary. The information is extracted from the annual reports of the HK-listed Chinese Enterprises. It is important to note that CEO may carry a functional title of General Manager amongst some of the listed Chinese corporations.

vii Nomination Committee

Among HK-listed companies, there are as many as 97% have had an audit committee but only 37% have had a nomination committee since 2005 (HKEx, 2010a). It is thus not required to control the effect of an audit committee on firm performance. The absence of a nomination committee tops the list of non-compliance of the CG Code-HK (HKEx, 2010a), which is indicative of a lack of independence of the board of directors. This may reflect an agency problem that could be associated with CEO duality. Its absence gives the entrenched leader the maximum bargaining power to extract rents (Bebchuk and Fried, 2003). Thus, leaders wearing both hats of CEO and

COB, are unlikely to embrace the idea of a nomination committee which may lessen their influence on the choice of directors (Monks and Minow, 2004). In other words, firms with CEO duality are more likely to reject the adoption of a nomination committee.

A Hong Kong study confirms that the presence of a nomination committee amongst international companies is positively associated with corporate competitiveness (Ho, 2005). Large US public firms with a nomination committee also perform better, using both accounting-based and market-based measures (Wallace and Cravens, 1997). Thus, nomination committee (NCOM) is included as a control variable. It is a dummy variable of one (1) with its presence and zero (0) otherwise.

#### viii. Global Financial Crisis

Environmental dynamism has often been a subject of extensive research into the effect of leadership on performance (Ezzine and Olivero, 2011; Peng et al., 2007). Financial and bank crises in developed economies appear to affect the above relationship (Tan et al., 2001). The GFC is considered an external environmental moderating factor in the hypotheses of leadership structure and performance of H2a and H2b. Similar to CEO duality, GFC is a binary variable. According to Ivashina and Scharfstein (2010), GFC starts at the end of 2007, and thus its value equals one (1) with the presence of GFC during 2008 - 2010, and zero (0) otherwise for the period of 2004 - 2007.

### 3.4.2 Dependent Variables

Firm performance is the dependent variable of the research model. There are a number of ways to measure this value. Earnings (EBITDA), return on asset (ROA) and return on equity (ROE) are used as the accounting-based measures for firm performance. EBITDA is the preferred presentation of earnings of the companies before interest expenses, income taxes, depreciation & amortisation, to achieve a consistent comparison of earnings amongst firms. According to the Worldscope guideline, EBITDA (WC18198) is calculated by taking the pre-tax income and adding back interest expense on debt and depreciation, depletion and amortisation and subtracting interest capitalised.

Since ROA (WC08326) is not directly available, the data have to be obtained using the Thomson Reuters' formula of Annual Time Series for 1987 till now:

$$\text{ROA} = \frac{(\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt-Interest Capitalised}) \times (1 - \text{Tax Rate})))}{\text{Average of Last Year's and Current Year's Total Assets}} \times 100, \text{ i.e. } \frac{((\text{WC01651} + ((\text{WC01251} - \text{WC01255}) \times (1.0 - \text{tax rate}))) + \text{last year's WC02999})}{2} \times 100$$

Tobin's Q, on the other hand, is often adopted for CG study as it is a popular market-based measure of firm performance or firm value in accounting and finance literature.

MTBV and Tobin's Q are highly correlated with a coefficient as high as 0.996, and therefore it is generally used as proxy for Tobin's Q (Bai et al., 2004). Due to data limitations, this study uses MTBV instead of Tobin's Q as a performance measure. MTBV is obtained from Bloomberg. Its correctness is verified and validated by calculating the market value of equity versus its book value of equity based on the data from a number of annual reports.

### **3.5 SAMPLE AND DATA**

Non-probability sampling of a total of 145 Chinese companies listed on HKEx in 2004 is considered for empirical analysis. This includes 67 H-shares, 74 Red-chips and 4 non H-share Mainland private enterprises (NHMPes). Chinese companies from the second board, Growth Enterprise Market (GEM), are not considered, as their history, resources, business complexity and size differ a lot from those on the main board. There were four NHMPes in 2004. These non state-owned Chinese firms were too few in number to represent a significant group for analysis, and they are excluded. Only Chinese companies, i.e. H-shares and Red-chips, listed throughout the period from 2004 to 2010 are selected. 11 companies with missing or incomplete data due to reasons like economic fraud, investigation or suspension are taken out from the list. Even though financial institutions have a different capital structure and leverage (Lam and Lee, 2008), they are included because of their importance to the understanding of the effect of the GFC on firm performance of the sampled Chinese enterprises. 35

firms are excluded in the process of satisfying the assumptions for regression analysis. The details of the sample breakdown is illustrated in Table 3.3.

Population	Listed Chinese firms on HKEx in 2004	145
Exclude	Non H-share Mainland private enterprises (NHMPes)	4
	Chinese firms not listed throughout 2004 - 2010	11
	Firms with missing information on variables	18
	Firms failing the linear regression assumptions	35
Final Sample		77

**Table 3.3** Sample Size of the Dissertation

The final sample of the proposed study is the 77 Chinese H-share and Red Chip companies listed on the main board of HKEx from 2004 to 2010. The list of 49 H-shares and 28 Red-chips, included in the study is presented in Appendix 1 with a total of 539 firm-years of observation (77 firms X 7 years). The sample size and the degree of freedom for the regression well exceeds that suggested by Krejcie and Morgan (1970, cited by Sekaran and Bougie, 2009, pp.294-295) for the number of factors in consideration. Information on the listed firms is collected from their annual reports, HKEx database, Thomson Reuters financial service and government websites. The study does not intend to single out a sample of these companies in a particular industry sector, range of company size or class of ownership. According to HKEx, a foreign company is defined as a firm incorporated overseas with majority of its business outside Hong Kong and Mainland China. This group of H-share and Red-chip firms have significantly different financial profiles to the local companies listed publicly (Cheng, 2008).

Separation of CEO and Chair is recommended by the Code Provision A.2.1 of HKEx for all listed companies in Hong Kong. Subsequent to the financial year ended in July 2005, corporations are required to file and publish their annual reports, which include a corporate governance report. It is meaningful to measure the changes in performance before and after the introduction of the Code Provisions. Above all, performance variance could be best highlighted by major financial crisis. Thus, seven years of data from 2004 to 2010 are used to cover the period prior to the implementation of HK-CG Code in 2005 and up till 2010 of the ongoing GFC.

### **3.6 DATA COLLECTION**

Data about the leadership structures, board size and nomination committee are collected by reviewing the corporate governance report section of annual reports. On the other hand, financial and accounting data for firm characteristics and performance are collected from Thomson Reuters DataStream. In order to compute ROA from its basic formula, 2003 data has to be obtained from DataStream as well. Doubtful data are verified against that from the annual reports of the listed companies.

The data from annual reports of the listed Chinese companies is prepared by certified accountants and scrutinised by external qualified auditors to be true and correct before publication and submission to the Government and regulatory bodies. The board of directors is responsible for the accuracy and reliability of the information under the listing rules of Hong Kong. Data integrity, validity and reliability are thus ensured for the secondary financial data. According to Lam & Lee (2008), the financial data of

Thomson Reuters is relatively accurate, but researchers have to be mindful of its accounting information. The data is nevertheless verified against those from Bloomberg Financial and those from annual reports whenever there is doubt over their accuracy.

To avoid error during transcription from annual reports, entries are double checked by a third party not involved in the data collection. This original set of data forms the basis for verification of any inconsistency and future reference. The data is obtained from a population of Chinese companies listed on the HKEx main board, and the research should be free of sampling bias. Its reliability is further enhanced by taking out the small number of extreme outliers.

Annual reports and data from Thomsons Reuters DataStream, ICRIS, HKEx (2011) and Bloomberg Financial are saved electronically in the listing stock code order. Data collected from annual reports is transcribed into Excel worksheet with copies stored in the hard disk.

### **3.7 DATA ANALYSES**

Ramdani and Witteloostuun (2009, p.29) summarises the use of data, variables, results and methodology of most of the recent CEO duality studies (Appendix 2). This dissertation uses ordinary least square (OLS) regression model for the empirical analysis. The descriptive analysis of the mean, median, standard deviation and correlations among the variables are conducted and presented in Chapter Four. The

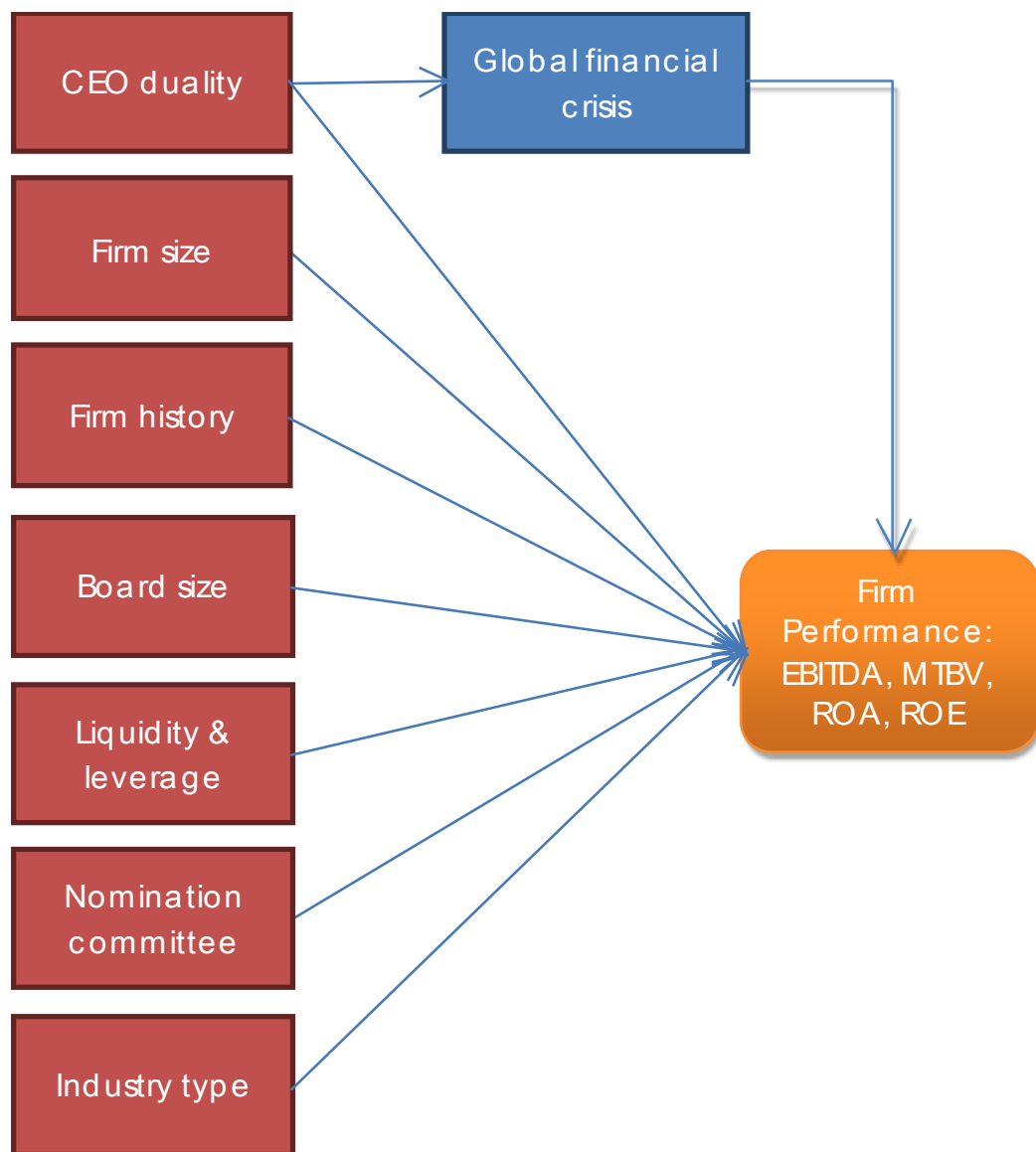


characteristics of H-shares are compared with that of Red-chips using the independent t-test. The study attempts to compare the impact of CEO duality on performance of listed firms for the fiscal years ended in 2004 through 2010, covering the effect of the recent global financial crisis.

The hypotheses are tested by regressing the dependent variable on the whole host of explanatory variables like CEO duality, GFC, firm size, age and industry against the independent variables in the next chapter. The multiple regression model is tested. The moderating effect of the GFC on the leadership-performance relationship is measured with and without the presence of the GFC as an independent dichotomous variable. Regression diagnostics are conducted to check the validity of the assumptions underlying our regression model.

### **3.8 SUMMARY**

This chapter covers the important research paradigm, design and process adopted for the study. A number of research questions on CEO duality and firm performance are put forward with corresponding hypotheses based on the conceptual framework of contingency theory. The independent variables of CEO duality and the GFC, the control variables of firm characteristics and the dependent variables of firm performance, are introduced for the study. The factors driving firm performance are summarized in Figure 3.5. The next chapter presents a multiple regression model of firm performance based on this flow chart.



**Figure 3.5** Factors affecting firm performance

The 145 publicly listed Chinese SOEs in Hong Kong during the period from 2004 to 2010 are included in the preliminary study with 77 are screened for the final sample. The secondary financial and accounting data is collected from their annual reports and

Thomson Financial DataStream. The reliability of data and the limitation of the methodology are also discussed.

## **CHAPTER FOUR**

### **DATA ANALYSIS AND FINDINGS**

#### **4.1 INTRODUCTION**

This chapter provides the empirical model and discusses the results. Data from the population of the 145 Chinese H-shares and Red-chips listed on the main board of Hong Kong between 2004 and 2010 are used for empirical analysis.

There are seven sections in this chapter. The first section gives an overview of this chapter. Section 2 presents the empirical model of the study. The third section reports details of data preparation and presents statistical properties of data. This is followed by the fourth section, presenting the correlation results. Section 5 provides the t-test results for differences in means of the variables for the whole sample and the subgroups of H-shares and Red-chips. The sixth section presents the key findings. The last section gives a summary of the chapter.

## 4.2 A REGRESSION MODEL OF FIRM PERFORMANCE

To examine the potential effect of CEO duality on financial performance of Chinese companies a multiple regression model is used. The global financial crisis is hypothesised as a moderator of duality. A dummy variable (GFC\_DUAL) for the GFC is interacted with the CEO duality variable to examine whether the effect of CEO duality on firm performance is dependent upon financial crisis. In addition, a set of variables are served as covariates in the model. Their effects need to be controlled for in order to isolate the partial effect of CEO duality on firm performance. More specifically, the following regression model is proposed to explain firm performance of the HK-listed Mainland Chinese companies:

$$Y_{it} = \alpha_i + \beta_1 CR_{it} + \beta_2 DE_{it} + \beta_3 DUAL_{it} + \beta_4 NCOM_{it} + \beta_5 L\_HIST_{it} + \beta_6 IND_{it} + \beta_7 L\_BSIZE_{it} + \beta_8 L\_MC_{it} + \beta_9 L\_NS_{it} + \beta_{10} L\_TA_{it} + \beta_{11} GFC_{it} + \beta_{12} GFC\_DUAL_{it} + \epsilon_{it}$$

$Y_{it}$  is an indicator of firm performance (EBITDA, MTBV, ROA or ROE)

$i$  refers to stock code of the firm

$t$  refers to the year of measurement

$\alpha_i$  is the constant intercept on  $Y$

$\beta_1 - \beta_{12}$  refer to the coefficient of the independent variables and covariates

$\epsilon_{it}$  is the error term

## Variables

EBITDA	Earnings before interest, tax, depreciation and amortisation
MTBV	Market-to-book value of equity
ROA	Return on total assets
ROE	Return on equity
CR	Current ratio (current assets over current liabilities)
DE	Debt-to-equity ratio (long-term debt over common equity)
DUAL	A dummy variable for CEO duality, which takes a value of 1 and 0 otherwise
GFC	A dummy variable for global financial crisis, which takes a value of 1 during the global financial crisis of 2008-2010 and 0 otherwise.
HIST	Firm history (years of incorporation)
IND	A dummy variable that takes a value of 1 for financial firms and 0 otherwise
L_BSIZE	Logarithm of board size
L_MC	Logarithm of market capitalisation
L_NS	Logarithm of net sales
L_TA	Logarithm of total assets
NCOM	A dummy variable for Nomination committee

As discussed in Chapter 3, the coefficients,  $\beta_1$ ,  $\beta_2$ ,  $\beta_4$ ,  $\beta_5$ , and  $\beta_8$  to  $\beta_{10}$  are expected to be positive, whereas  $\beta_3$  and  $\beta_7$  are expected to be negative. GFC is a pure moderator of DUAL if the coefficient of the interaction term, GFC\_DUAL is significantly different from zero and the coefficient of GFC is not statistically different from zero. On the other hand, it is a quasi-moderator if both GFC and GFC\_DUAL are statistically significant predictors of firm performance.

## 4.3 STATISTICAL PROPERTIES OF DATA

This section presents data sources and investigates the statistical properties of data for the whole sample and sub-groups and examines whether the assumptions underlying

the t-tests for differences in means and regression analyses are met. To ensure compliance with normality, homogeneity of variance, linearity and non-multicollinearity, data are transformed and irrelevant explanatory variables or outliers are removed. The descriptive statistics of the final set of dependent and explanatory variables are presented at the end of this section.

#### **4.3.1 Data Sources**

Chinese Mainland firms represent over 30% of the total number of listed companies on the main board of HKEx (2010b). Their financial and corporate governance data are obtained from Thomson Reuters DataStream through Bloomberg Financials, the annual reports and the HKEx and Companies Registry of Hong Kong. Corporate governance data for duality, board size, nomination committee are extracted from the 1,015 on-line annual reports (145 companies over 7 years) of all the H-share and Red-chip shares. Firm-specific information on industry type and year of incorporation is collected from the websites of HKEx ([www.hkex.com.hk](http://www.hkex.com.hk)) and of Hong Kong Government Cyber Search Centre of the Integrated Companies Registry Information System ([www.icris.cr.gov.hk](http://www.icris.cr.gov.hk)).

The population for the study contains 145 HK-listed Chinese companies of which, 67 are from H-shares, 74 are Red-chips and 4 NHMPEs. Excluding NHMPEs and companies with missing data, 112 companies are selected for empirical analysis. To conduct data analysis, the original set of time-series data of 784 firm years for 112

firms is arranged into a panel and the assumptions of normality, linearity, homogeneity and non-multicollinearity are checked.

#### **4.3.2 Data Processing**

CEO duality (DUAL), the global financial crisis (GFC), industry type (IND) and the existence of nomination committee (NCOM) are categorical variables. Hence, the moments of their distributions could not be considered for comparison. Out of 784 company years, there are 687 company years without CEO duality ( $DUAL = 0$ ) and 97 company years with duality ( $DUAL = 1$ ).

In line with earlier studies, some of the variables such as firm history (HIST), total firm asset (TA) and firm net sales (NS) are transformed into logs, to reduce their skewness or kurtosis and mitigate influence of the outlier data points. DUAL is the main independent variable of interest.

#### **4.3.3 Verifying Assumptions of Regression Analysis and Mean Tests**

Independence, normality, linearity and homogeneity are important assumptions for the regression and the comparison of means. Data independence and reliability are dealt with by the quantitative method design stated in Chapter 3.



The assumption of normal distribution for the dependent variables is tested by the Kolmogorov-Smirnov test, a goodness of fit test. This test is conducted on the four dependent variables EBITDA, MTBV, ROA and ROE. Normality is required for the whole dataset as well as the sub-groups. The null hypothesis of normality is rejected by the Kolmogorov-Smirnov test at the 5% significance level for each of these dependent variables.

In addition, Levene's Test rejects the null hypothesis of the homogeneity of variances for the four dependent variables. Among the four possible dependent variables, the ratio of market value-to-book value (MTBV) is finally chosen as the preferred performance indicator because its logarithmic transformation gives the acceptable normality and homogeneity results. Moreover, it's a close proxy of Tobin's Q, which is frequently used in the literature to measure performance and firm's corporate governance. Thus, logarithmic transformation of MTBV (L\_MTBV) is adopted as the dependent variable for the linear regression analysis and Analysis of Covariance (ANCOVA).

For the final sample, 15 of the H-shares and 20 of the Red-chips outliers have to be removed to meet the normality requirement. The Kolmogorov-Smirnov Test result ( $p = 0.028$ ) for the final sample of 539 observations falls slightly below 0.05. Further pruning of Red-chips sub-group to achieve normality is however resisted, to avoid sacrificing valuable data, and to make the design more balanced between the two sub-groups for comparison.

Their scatterplots show that linear relationships exist between the dependent variable and the covariates. In addition, an Analysis of Covariance (ANCOVA) is run with the firm performance indicator, Log of market-to-book ratio (L\_MTBV) as the dependent variable. The ANCOVA model is found to be robust to the violation of homogeneity. At alpha level of 0.05, the main independent variable of interest, DUAL, maintains similar statistical significance, with or without the violation of the homogeneity assumption or the presence of the covariate, L\_NS. Consistent statistical results of significance of DUAL and GFC are found for the sub-groups for the periods before and after GFC, the periods before and after HK-CG Code with and without L\_NS. This is in line with the suggestion that linear regression is robust to the assumption of homogeneity when the sample size is large. In summary, a final sample of 539 observations from 77 companies with 343 from H-shares (49 companies) and 196 from Red-chips (28 companies) in the period of 2004 – 2010, is obtained for regression analyses and t-tests.

#### **4.3.4 Descriptive Statistics**

Descriptive statistics for the variables used in the final regression model are shown in this sub-section. Table 4.1 represent descriptive statistics for the set of scale independent variables for the full sample, Red-chips and H-shares sub-groups, respectively. In contrast, DUAL, GFC, GFC\_DUAL, IND and NCOM are nominal data. They are also dichotomous variables with binary value. Their descriptives for full sample, H-shares and Red-chips are summarised as shown in Table 4.2. For the period before and after the GFC, descriptive statistics are presented in Table 4.4 for

the scale independent variables and in Table 4.5 for the nominal variables. Their trends over the period are shown in Figure 4.1 to Figure 4.8.

Compared to the large percentage (34%) of HK-listed companies with CEO duality, a relatively small percentage (11.87%) of HK-listed Chinese companies has duality. CEO duality presents in 64 firm years out of a total 539 panel data of the full sample (Table 4.3). Nine out of the total 49 H-shares and five out of the total 28 Red-chips have CEO duality during 2004 – 2010. Before the introduction of HK-CG Code, there were only six out of the 77 sampled firms with duality in 2004. After the implementation of HK-CG Code, there are as many as 14 out of the 77 firms with duality during 2005 – 2010. The population of 141 Chinese SOEs also displays a similar pattern of change in CEO duality over the period (Figure 4.9). Its overall number does not reduce with the introduction of HK-CG Code. Nonetheless, its presence drops gradually as of 2007 and exists only amongst a small number of Mainland Chinese companies.

<b>2004 - 2010</b>	<b>L_BSIZE</b>	<b>L_CR</b>	<b>L_1_DE</b>	<b>L_HIST</b>	<b>L_MC</b>	<b>L_MTBV</b>	<b>L_NS</b>	<b>L_TA</b>
Full Sample (N=539)								
Mean	1.0178	0.1323	0.1039	1.0534	9.8720	0.4127	9.7621	10.1019
Standard deviation	0.0983	0.3329	0.1352	0.2460	0.7771	0.2257	0.8002	0.6812
Skewness	-0.3970	-0.2170	1.9860	0.0430	0.3860	-0.1110	0.2930	0.2780
Kurtosis	-0.2850	0.9070	4.4790	0.8850	0.3780	0.0330	0.1800	0.5250
H-Shares (N=343)								
Mean	1.0250	0.0486	0.1134	0.9844	10.0234	0.4453	9.9726	10.2483
Standard deviation	0.0939	0.3407	0.1511	0.1926	0.7498	0.1952	0.7532	0.6446
Skewness	-0.4850	-0.2160	1.8270	-1.1790	0.4300	-0.2270	0.5100	0.6190
Kurtosis	-0.1570	0.6280	3.2150	1.2750	0.4250	0.8970	0.3880	0.5080
Red-Chips (N=196)								
Mean	1.0053	0.2789	0.0871	1.1743	9.6071	0.3556	9.3937	9.8455
Standard deviation	0.1048	0.2612	0.0997	0.2809	0.7544	0.2618	0.7465	0.6692
Skewness	-0.2240	0.6750	1.8930	0.0070	0.4690	0.2670	0.1320	-0.0410
Kurtosis	-0.4350	0.6570	6.2420	-0.4530	0.5690	-0.5330	-0.7160	-0.1040

**Table 4.1** Descriptive Statistics of the Scale Variables of the Full Sample, H-shares and Red-chips during 2004 - 2010

<b>2004-2010</b>	<b>DUAL</b>	<b>GFC</b>	<b>GFC_DUAL</b>	<b>GROUP</b>	<b>IND</b>	<b>NCOM</b>
Full Sample (N=539)						
Mean	0.12	0.43	0.05	1.36	0.01	0.38
H-Shares (N=343)						
Mean	0.12	0.43	0.05	1.00	0.00	0.48
Red-Chips (N=196)						
Mean	0.11	0.43	0.04	2.00	0.04	0.21

**Table 4.2** Descriptive Statistics of the Categorical Variables of the Full Sample, H-shares and Red-chip Sub-groups during 2004 – 2010

	<b>Firm</b>			<b>Panel Data (Firm Years)</b>		
	<b>Sample Size, N</b>	<b>CEO Duality</b>	<b>CEO Non-duality</b>	<b>Sample Size, N</b>	<b>CEO Duality</b>	<b>CEO Non-duality</b>
Full Sample	77	14	63	539	64	475
H-Shares	49	9	40	343	42	301
Red-Chips	28	5	23	196	22	174

**Table 4.3** The Occurrence of CEO Duality Amongst the Sample and Sub-Groups

	<b>L_BSIZE</b>	<b>L_CR</b>	<b>L_1_DE</b>	<b>L_HIST</b>	<b>L_MC</b>	<b>L_MTBV</b>	<b>L_NS</b>	<b>L_TA</b>
2004 - 2007 (N=308)								
Mean	1.0177	0.1315	0.0885	0.9897	9.8247	0.3543	9.6706	10.0020
Standard deviation	0.0991	0.3178	0.1109	0.2634	0.7886	0.2134	0.7731	0.6659
Skewness	-0.4220	-0.4870	1.5960	0.1690	0.3640	-0.1810	0.3850	0.2550
Kurtosis	-0.1740	1.0150	2.2700	0.6180	0.5410	0.0610	0.2690	0.9020
2008 - 2010 (N=231)								
Mean	1.0180	0.1334	0.1244	1.1386	9.9352	0.4905	9.8842	10.2350
Standard deviation	0.0975	0.3527	0.1601	0.1905	0.7584	0.2183	0.8208	0.6801
Skewness	-0.3640	0.0460	1.9030	0.8170	0.4500	-0.1300	0.1570	0.3090
Kurtosis	-0.4260	0.7650	3.5310	1.1160	0.1420	0.0060	0.2010	0.1080

**Table 4.4** Descriptive Statistics of the Scale Variables of the Full Sample during 2004 – 2007 and 2008 – 2010

	<b>DUAL</b>	<b>GFC</b>	<b>GFC_DUAL</b>	<b>GROUP</b>	<b>IND</b>	<b>NCOM</b>
2004 - 2007 (N=308)						
Mean	0.13	0.00	0.00	1.36	0.01	0.31
2008 - 2010 (N=231)						
Mean	0.11	1.00	0.11	1.36	0.01	0.46

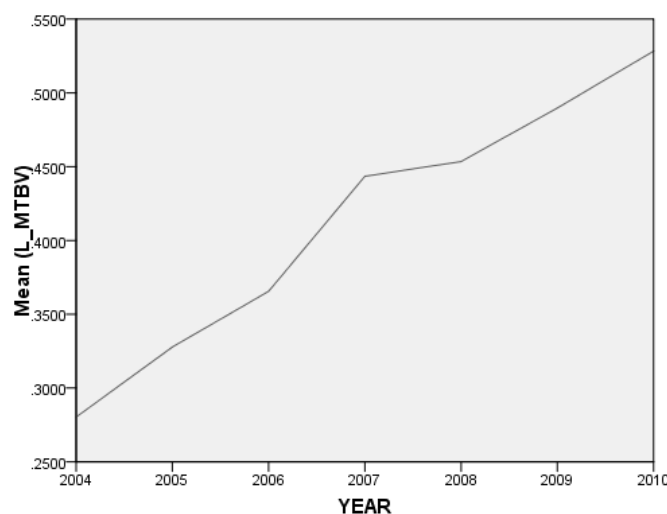
**Table 4.5** Descriptive Statistics of the Categorical Variables of the Full Sample during 2004 – 2007 and 2008 – 2010

The dummy variable for global financial crisis (GFC) takes a value of 1 during 2008 – 2010 and 0 otherwise. On the other hand, GFC\_DUAL is the interaction term, representing the product of the GFC and DUAL. It is used to examine whether the effect of CEO duality is moderated by the global financial crisis.

Mainland Chinese companies are distributed amongst the financial and ten non-financial industries according to the classification of the HKEx (2011). There are 11 companies in the financial industry. Their board size ranges from 6 to 19 members for the full sample and the Red-chips sub-group, and 6 – 15 for the H-shares. There is

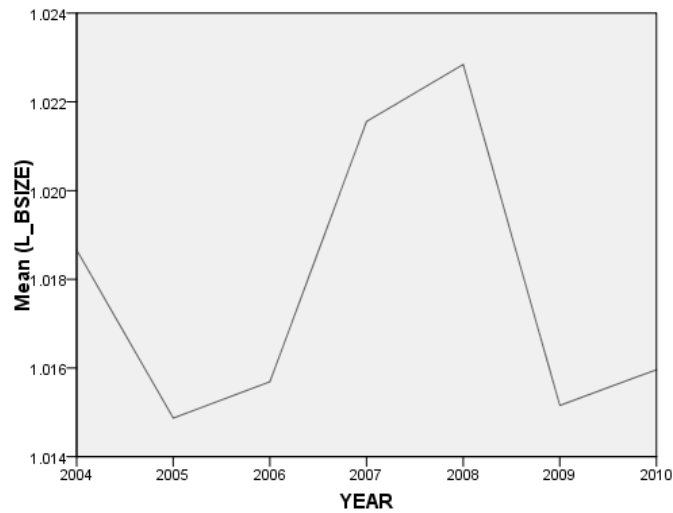
little change in the size of the board over the years (Figure 4.2). The mean board size is 10.68 members for the full sample of the 77 HK-listed Chinese companies versus 10.34 of the whole 141 H-shares and Red-chips over the period of 2004 - 2010 (Table 4.6). The population mean of board size is close to the median value of 10.99 members with little variance, which is similar to the mean of 10.77 measured by Lam and Lee (2008) in 2003. H-shares companies tend to have a larger number of board directors (mean L\_BSIZE = 1.024) than Red-chips firms (mean L\_BSIZE = 1.005) (Table 4.1). Similarly for the final data set, H-shares companies have slightly larger board size (BSIZE = 10.83) compared to Red-chips firms (BSIZE = 10.41). They have a similar number of firms with CEO duality at around 11 - 12% (Table 4.2).

The mean of L\_HIST of Table 4.1 represents the mean of history of the sampled firms over a period of seven years, from 2004 - 2010. The Chinese firms of the full sample have been in business for an average of 10.33 years, ranging from 1.93 years to 12.01 years as counted in 2004. In general, Red-chip firms have longer business history with mean of 15.33 years, compared to the mean of 7.48 years of H-shares as of 2004.

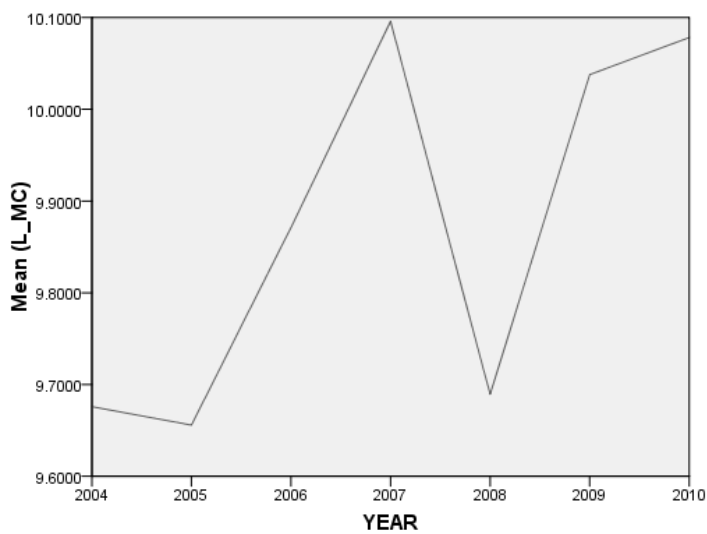


**Figure 4.1** The Trend of Firm Performance Indicator, Log of Market to Book Value

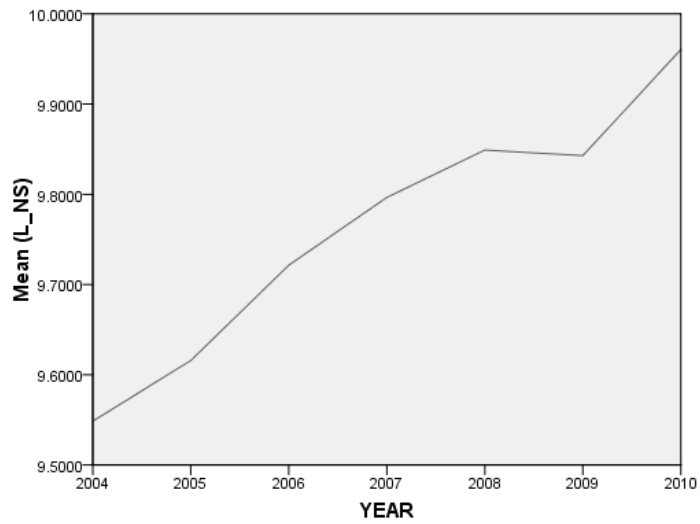
(L\_MTBV) of the Full Sample during 2004 – 2010



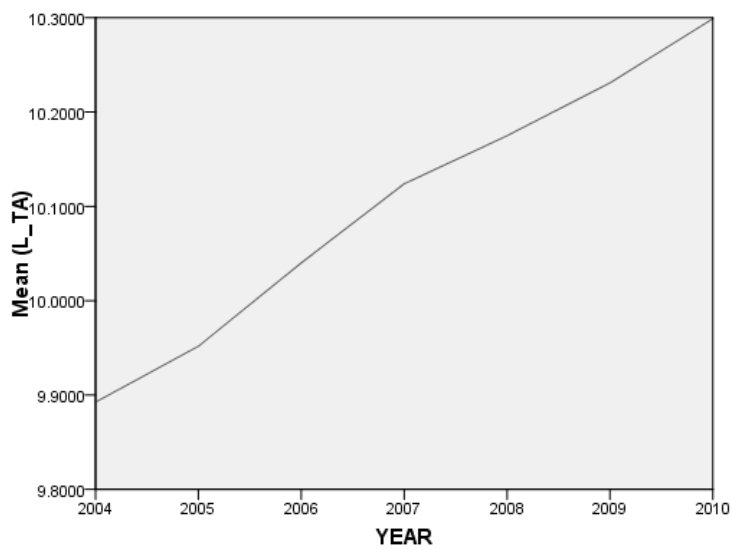
**Figure 4.2** The Trend of Independent Variable, Log of Board Size (L\_BSIZE) of the Full Sample during 2004 – 2010



**Figure 4.3** The Trend of Independent Variable, Log of Market Capitalisation (L\_MC) of the Full Sample during 2004 – 2010

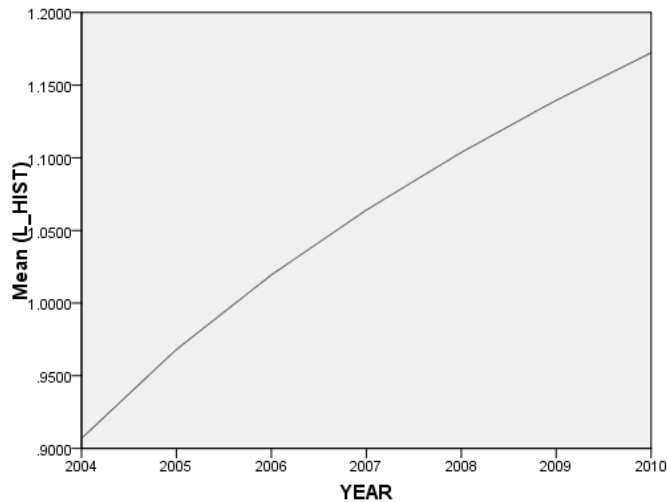


**Figure 4.4** The Trend of Independent Variable, Log of Net Sales (L\_NS) of the Full Sample during 2004 – 2010



**Figure 4.5** The Trend of Independent Variable, Log of Total Asset (L\_TA) of the Full Sample during 2004 - 2010



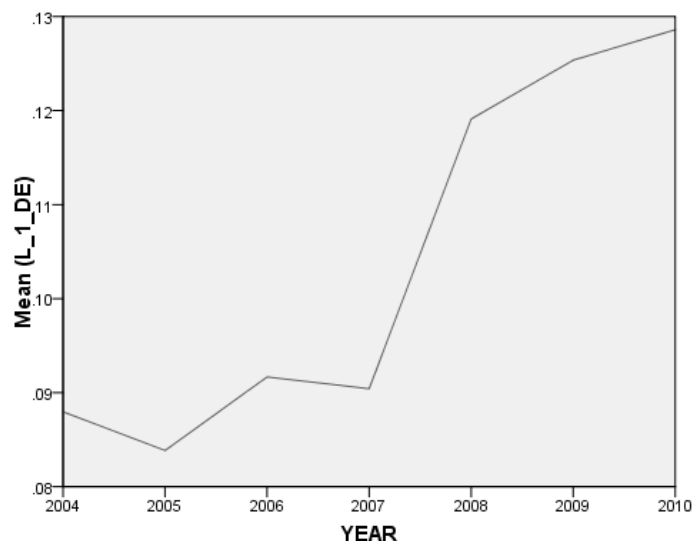


**Figure 4.6** The Trend of Independent Variable, Log of Firm History (L\_HIST) of the Full Sample during 2004 – 2010

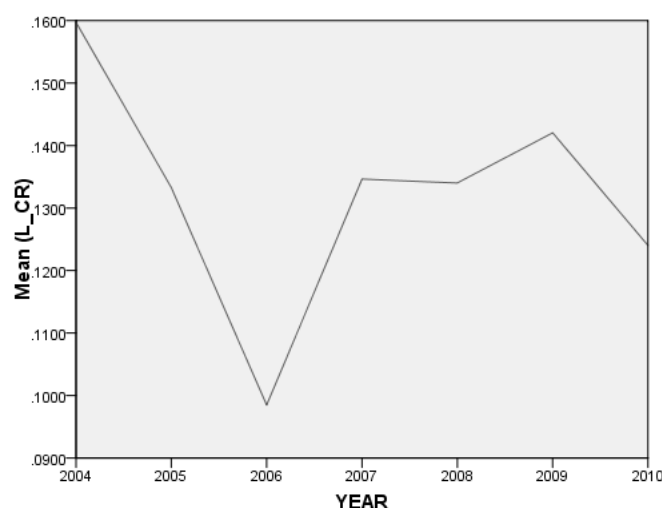
While board size remains at a similar level between 2004 – 2010, the firm leverage, firm performance and size in terms of market capitalisation, net sales and total asset improve between 2008 – 2010 compared to the period between 2004 – 2007 (Table 4.5). The covariates, current ratio (CR) and debt-to-equity (DE), exhibit skewness with high kurtosis. Hence, they are expressed in logarithmic form to enhance their normality. However, firm leverage of debt to equity (L\_1\_DE), rises gradually before 2008, then climbs significantly in 2008, and slows down in 2009 – 2010 (Figure 4.7). This is in line with the change in current asset over current debt (L\_CR), which drops sharply from 2004 to 2006 to rise back in 2006 – 2009 (Figure 4.8) and then fall again in 2009 – 2010. The mean value of CR of the full sample is 1.81 ( $L\_CR = 0.132$ ), which is slightly less than the convention of 2 as suggested by Lam and Lee (2008). The mean current ratio of H-shares is 1.51. It is much less than that of Red-chips at 2.34.

The listed Chinese firms are sizeable in terms of market capitalisation (MC), net sales

(NS) and total asset (TA) with means close to 506 billion HKD, 423 billion HKD and 526 billion HKD, respectively for the period of 2004 - 2010. As shown in Table 4.1, H-share companies (mean  $L\_MC = 10.0234$ , mean  $L\_TA = 10.2483$ ) tend to have a much bigger business size compared to that of Red-chips (mean  $L\_MC = 9.6071$ ,  $L\_TA = 9.8455$ ), both in market capitalisation and total assets (Table 4.1). There is no significant change in Log of market capitalisation (over the period of 2004 – 2010 (Figure 4.3) but a gradual increase in net sales and total asset is observed (Figure 4.4, Figure 4.5).



**Figure 4.7** The Trend of Independent Variable, Log of Debt to Equity ( $L\_1\_DE$ ) of the Full Sample during 2004 – 2010



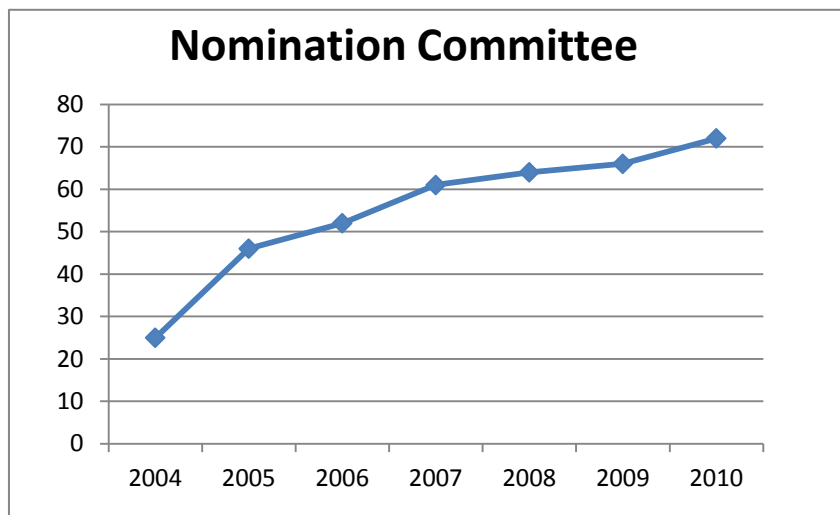
**Figure 4.8** The Trend of Independent Variable, Log of Current Ratio (L\_CR) of the Full Sample during 2004 – 2010



**Figure 4.9** The Trend of CEO Duality of the 141 HK-listed Chinese Companies during 2004 – 2010

Similar to the listed companies in Hong Kong, nomination committees are not popular amongst the Chinese companies. Together with CEO duality, they consistently top the list of non-compliance with the HK-CG Code since 2004 (HKEx, 2010a). Nonetheless, they have steadily increased from 25 to 72 for the 141 HK-listed Chinese companies between 2004 – 2010 (Figure 4.10). H-share sub-group has a higher number of nomination committees compared to Red-chips firms. For the final

sample, there are twice as many H-share firms with nomination committees as the Red-chips sub-group (Table 4.2). A summary of the occurrence of CEO duality, nomination committee, GFC and average board size is presented in Table 4.6.



**Figure 4.10** The Trend of The Establishment of Nomination Committees for the 141 Chinese Companies during 2004 – 2010

Year	Variables	HK-listed Chinese Firms	H-shares	Red-chips
2004	Firms with CEO/COB Duality	14	5	8
	Firms with Nomination Committee	25	13	10
	Avg Board Size	10.53	10.40	10.11
2005	Firms with CEO/COB Duality	17	6	11
	Firms with Nomination Committee	46	24	20
	Avg Board Size	10.36	10.27	9.86
2006	Firms with CEO/COB Duality	18	8	10
	Firms with Nomination Committee	52	28	23
	Avg Board Size	10.42	10.28	10.30
2007	Firms with CEO/COB Duality	20	10	10
	Firms with Nomination Committee	61	35	25
	Avg Board Size	10.55	10.46	10.50
2008	Firms with CEO/COB Duality	18	9	9
	Firms with Nomination Committee	64	38	25
	Avg Board Size	10.56	10.40	10.57
2009	Firms with CEO/COB Duality	14	8	6
	Firms with Nomination Committee	66	38	26
	Avg Board Size	10.50	10.37	10.43
2010	Firms with CEO/COB Duality	12	5	5
	Firms with Nomination Committee	72	43	28
	Avg Board Size	10.64	10.27	10.61

**Table 4.6** Details of CEO Duality, Nomination Committee and Average Board Size for the 141 H-share and Red-chip Chinese Companies during 2004 – 2010

#### 4.4 T-TESTS OF MEANS

One of the key objectives of this study is to evaluate if there is any difference in performance between the Chinese sub-groups of H-shares and Red-chips and between different periods before and after the GFC.

#### **4.4.1 Differences in Performance between H-shares and Red-chips**

In order to study if there is a difference in performance between H-shares and Red-chips for the final set of data during the period of 2004 – 2010, an independent t-test is used for the two independent sub-groups. Levene's test statistic has a p-value close to zero, suggesting that the Homogeneity assumption is violated. Hence, the results obtained under the assumption of non-homogenous variance are used (Table 4.7) for hypothesis testing. The independent t-test suggests that the null hypothesis of no significant difference in performance between H-shares and Red-chips can be rejected with a p-value of close to zero. H-shares outperform Red-chips in term of the market-to-book ratio. Similarly the assumption of equality of variances is violated during pre-GFC and GFC periods. So the tests results are used under the assumption of unequal variances. At the 95% confidence level, the p values of the two-tail tests are highly significant, at 0.000 and 0.015 respectively for 2004 - 2007 and 2008 - 2010. In other words, H-shares consistently outperform Red-chips during both periods of 2004 – 2007 and 2008 – 2010 as well as throughout the whole period of 2004 – 2010, at alpha level of 0.05.

		Levene's Test for Equality of Variances		t-test for Equality of Means					Interval of the Difference	
		F	Sig.	t		Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower	Upper
L_MTBV 2004-2010	Equal Variances assumed	32.6540	0.000	4.5170	537	0.000	0.0897	0.0199	0.0507	0.1287
	Equal Variances not assumed			4.1780	320.192	0.000	0.0897	0.0215	0.0474	0.1319
L_MTBV 2004-2007	Equal Variances assumed	23.3800	0.000	4.0160	306	0.000	0.0991	0.0247	0.0505	0.1477
	Equal Variances not assumed			3.6360	171.375	0.000	0.0991	0.0273	0.0453	0.1529
L_MTBV 2008-2010	Equal Variances assumed	7.9030	0.005	2.6140	229	0.010	0.0771	0.0295	0.0190	0.1352
	Equal Variances not assumed			2.4640	144.250	0.015	0.0771	0.0313	0.0152	0.1389

**Table 4.7** Independent-sample t-test Results for H-shares and Red-chips Sub-groups during 2004 – 2010, 2004 – 2007 and 2008 – 2010

#### **4.4.2 Differences in Performance between Periods before and during the GFC**

The paired-sample t-test is run to compare the Log of Mean MTBV (L\_Mean\_MTBV) with the full sample of 77 companies (Table 4.8), to study if there is any significant difference between performance of the same companies during the different periods of 2004 – 2007 and 2008 – 2010. The Log of Mean MTBV for 2004 – 2007 is 0.3661 versus 0.4914 of 2008 – 2010. Looking at the two-tailed t-statistics, the p value is 0.000, which is much lower than 0.05, significant at 95% confidence level. Firm performance of Mainland Chinese companies for the full sample improves significantly during 2008 - 2010 of the GFC compared to that prior to the GFC in 2004 - 2007.

To study the difference in performance within each of the sub-groups of H-shares and Red-chips between 2004 – 2007 and 2008 - 2010, paired-sample t-tests are also run individually comparing Logarithm 10 of the mean of MTBV for the periods, using the final set of 49 H-shares and 28 Red-chips. Both sub-groups share similar findings as that of the whole data set. The mean L\_MTBV of H-shares is 0.3977 in 2004-2007 compared to 0.5219 in 2008 – 2010. Their difference is statistically significant at  $\alpha = 0.05$  ( $p = 0.000$ ). For Red-chips, similar significant results are found with mean L\_MTBV at 0.3109 for 2004 – 2007 and 0.4379 for 2008 – 2010.



		Paired Differences			
		Mean	t	df	Sig (2-tailed)
Full Sample	L_MEAN_MTBV_2004_2007	-0.1252	-8.207	76	0.00
	L_MEAN_MTBV_2008_2010				
H-Shares	L_MEAN_MTBV_2004_2007	-0.1242	-6.72	48	0.00
	L_MEAN_MTBV_2008_2010				
Red-Chips	L_MEAN_MTBV_2004_2007	-0.1270	-4.672	27	0.00
	L_MEAN_MTBV_2008_2010				

**Table 4.8** Paired t-test Results for Performance (L\_MTBV) for the Full Sample, H-shares and the Red-chips Sub-group during 2004 – 2007 and 2008 – 2010

In summary, there is a significant difference in firm performance between the two periods. The Chinese firms perform much better in the period after the start of the GFC as shown in Table 4.9. However, does CEO Duality or the GFC cause the consistent cross-sectional or time variation in firm performance? Is GFC a moderator of the relationship between CEO duality and firm performance? These are the subjects of regression analyses in the next section.

Paired-sample t-test		Mean L_MTBV		
		Full Sample	H-Shares	Red-Chips
Pair 1	L_MTBV 2004-2007	0.3661	0.3977	0.3109
GFC	L_MTBV 2008-2010	0.4914	0.5219	0.4379
Sig (2-tailed)	alpha level - 0.01	0.0	0.0	0.0

**Table 4.9** Effect of GFC on Firm Performance: Paired-sample t-test

## **4.5 REGRESSION ANALYSIS**

This section elaborates on the details of linear regression analyses of the data both for the full sample and the subgroups of H-shares and Red-chips. Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA) are the statistical models employed to obtain complementary information to help determine the contribution of the independent variables towards the change in firm performance.

### **4.5.1 Linear Regression of the Full Sample During 2004 - 2010**

The aim of the regression model is to test if the variables CEO duality (DUAL) and the global financial crisis (GFC) have any effect on performance after controlling for the effects of other independent variables including current ratio, debt-to-equity ratio, years of incorporation, board size, market capitalisation, total assets and nomination committee. As shown in Table 4.10, the final set of panel data contains 77 companies from 2004 to 2010 with 49 of H-shares and 28 of Red-chips of 343 and 196 observations respectively. Amongst the 77 companies, there are 204 company-years with nomination committee and 335 company-years without nomination committee, whereas there are 64 company-years with duality and 475 company-years without duality. The sample includes 308 observations from the pre-GFC period and 231 observations from the GFC period.

Number of Observations	Frequency	Percent
H-Shares	343	63.6
Red-Chips	196	36.4
Without CEO Duality	475	88.1
With CEO Duality	64	11.9
Sample Size 2004-2007	308	57.1
Sample Size 2008-2010	231	42.9

**Table 4.10** Number of Observations of H-shares and Red-chips, with and without CEO Duality and before and during the GFC

The variables, net sales (L\_NS), market capitalisation (L\_MC) and total asset (L\_TA) all represent firm size. L\_TA with high Partial Eta Squared (0.07) accounts for 7% of the variance of the performance indicator, Log of the market-to-book ratio (L\_MTBV). The removal of L\_NS slightly improves the Partial Eta Squared value for L\_TA (0.072) and ensures homogeneity with p value of around 5%. The explanatory power of the model, R Squared, reduces slightly from 0.371 to 0.365 due to the removal of L\_NS from the ANCOVA model.

After removing L\_NS and outliers, and transforming the variables, the empirical model is refined as follows:

$$\begin{aligned}
L\_MTBV_{it} = & \alpha_i + \beta_1 L\_CR_{it} + \beta_2 L\_1\_DE_{it} + \beta_3 DUAL_{it} + \beta_4 NCOM_{it} + \beta_5 L\_BSIZE_{it} + \\
& \beta_6 L\_HIST_{it} + \beta_7 IND_{it} + \beta_8 L\_MC_{it} + \beta_9 L\_TA_{it} + \beta_{10} GFC_{it} + \\
& \beta_{11} GFC\_DUAL_{it} + \epsilon_{it}
\end{aligned}$$

Table 4.11 presents the ANCOVA results for the full sample with the Log of the market-to-book ratio as the dependent variable for the period of 2004 - 2010. R-

Squared of 0.344 shows that 34.4% of the variance in Log of the market-to-book ratio (L\_MTBV) can be explained by all covariates. The CEO duality has a statistically significant effect on the Log of the market-to-book ratio at the 10% significance level. The corresponding Partial Eta Squared suggests that CEO duality can explain only 0.5% of the variance remaining in L\_MTBV after taking into account variance explained by other covariates. On the other hand, NCOM is highly significant with p value at 0.000, and its Partial Eta Squared at 0.084. In other words, NCOM correlates with L\_MTBV, and accounts for as much as 8.4% of the changes in firm performance during 2004 - 2010. All the covariates, except for industry type (IND) and board size (L\_BSIZE), are significant with p values below 0.05. They also show an important contribution to the changes in L\_MTBV. The Partial Eta Squared of the covariates is meaningful: L\_CR (current ratio) at 0.031 (3.1%), L\_1\_DE (debt to equity) at 0.037 (3.7%), L\_HIST at 0.048 (4.8%) and NCOM at 0.084 (8.4%). Total asset, L\_TA at 0.097 (9.7%) accounts for a large portion of the variance in firm performance.

<b>Source</b>	<b>F</b>	<b>Sig.</b>	<b>Partial Eta Squared</b>
<b>Full Sample</b>			
Corrected Model	30.788	0.000	0.344
Intercept	132.592	0.000	0.200
IND	0.887	0.347	0.002
L_BSIZE	0.216	0.642	0.000
L_CR	16.738	0.000	0.031
L_1_DE	20.579	0.000	0.037
L_HIST	28.907	0.000	0.048
L_MC	4.291	0.039	0.008
L_TA	57.108	0.000	0.097
NCOM	48.450	0.000	0.084
DUAL	2.739	0.099	0.005
R SQUARED = 0.344 (ADJUSTED R SQUARED = 0.333)			

**Table 4.11** ANCOVA Results of the Full Sample for 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

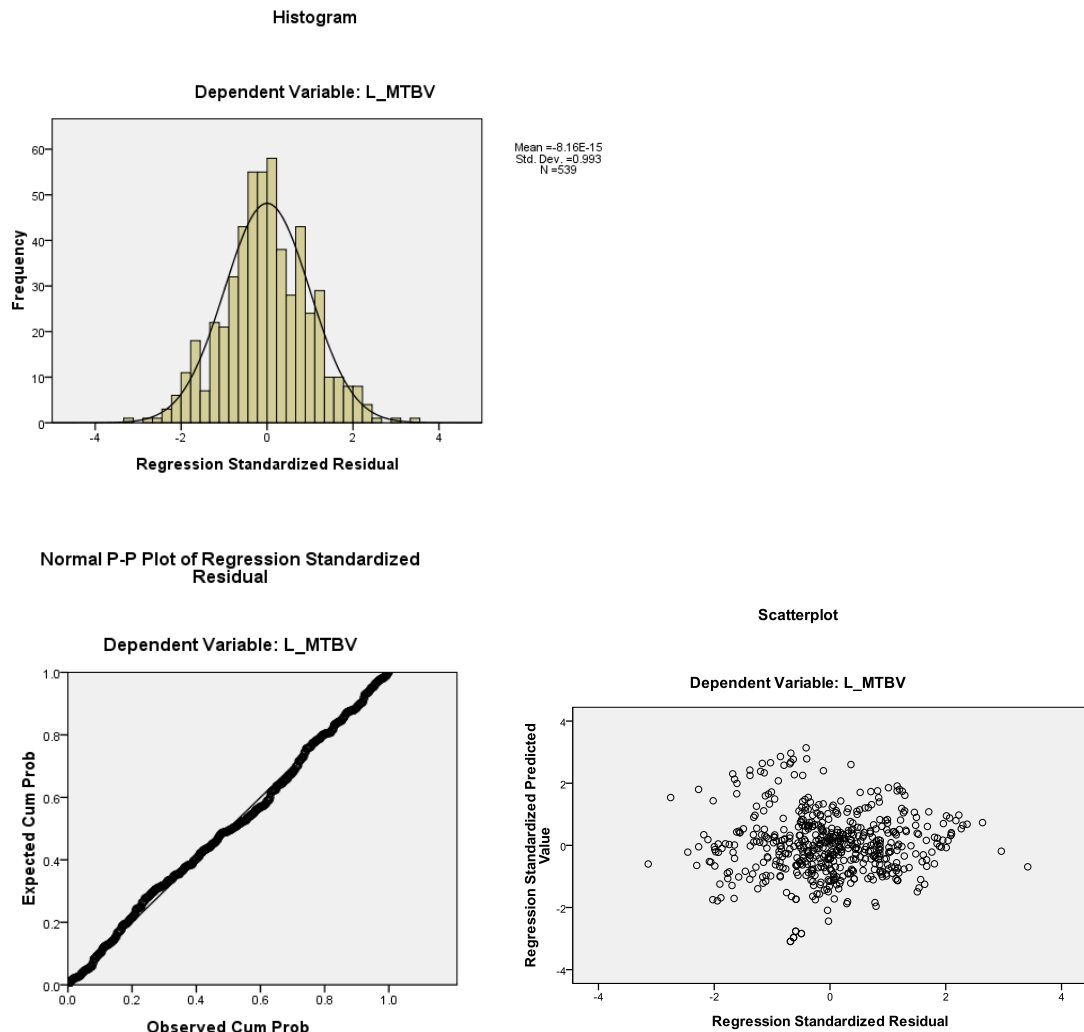
On top of univariate ANCOVA, linear regression analysis of ANOVA with all the independent variables, is run to obtain additional useful information (Table 4.12). Looking at the correlation coefficient jointly, the overall R squared is meaningful at 0.344, which means 34.4% of the variance of firm performance in L\_MTBV is explained by the independent variables. The overall F-statistic is high at 30.788 with p value at 0.000. It is highly significant at alpha level of 0.05. The null hypothesis is thus rejected and there exist correlations between the dependent variable and the independent variables at 95% confidence level.

<b>Model</b>	<b>Unstandardised Coefficients</b>	<b>Sig.</b>
<b>Full Sample</b>	<b>B</b>	
(Constant)	-1.818	0
DUAL	-0.042	0.099
IND	-0.070	0.347
L_BSIZE	0.041	0.642
L_CR	0.119	0
L_1_DE	-0.334	0
L_HIST	0.177	0
L_MC	-0.052	0.039
L_TA	0.247	0
NCOM	0.118	0

**Table 4.12** ANOVA Results of the Full Sample for 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

The p-value of the t-statistics of DUAL is at 0.099, which is less than 0.1 at 90% confidence level (Table 4.12). Its coefficient is at -0.042 with Partial Eta Squared at 0.005. In other words, DUAL is an explanatory factor with negative effect on firm performance indicator, L\_MTBV, though its effect is small. The intercept at Y when independent variables are zero for the regression is -1.818. The coefficients for the variables of the linear regression are: L\_CR at 0.119, L\_1\_DE at -0.334, L\_HIST at

0.177, L\_MC at -0.052, L\_TA at 0.247 NCOM at 0.118 with significant p values below 0.05. Thus, these independent variables contribute to the prediction of firm performance. Their choice as control variables for the model is supported.



**Figure 4.11** Histogram, Normal Probability Plot and Scattered Residual Plot of L\_MTBV of the Full Sample for 2004 – 2010

The absence of multicollinearity amongst the covariates and independent variables is fundamental to the regression study. The Variance Inflation Factors (VIFs) are less than 10 and their condition index (CI) is less than 30, which suggests the absence of multicollinearity. The Eigenvalue is less than 1. In addition, the histograms of

residuals are normally distributed, meeting the assumptions for linear regression (Figure 4.11). There is a straight line under normal p-plot, and the variables are scattered with little thickening, i.e. equal variance in the scatterplot. Overall, the regression is significant with extremely low p value, high F-statistics (30.788), large values of coefficient of determination and Fisher index.

#### **4.5.2 Moderation Effect of the Global Financial Crisis**

In order to test if GFC is a moderator of CEO duality (DUAL) affecting performance, the terms, GFC and GFC\_DUAL, are introduced to the model as covariates of the ANCOVA for the full sample during 2004 – 2010 (Table 4.13). R-Squared rises from 0.344 to 0.365 with better explanatory power. P value of Levene's Test at 0.053 for the final set of data with these additional variables, meets the Homogeneity test (p value > 0.05). NCOM remains highly significant with p value for the Tests of Between-Subjects Effects at 0.000, F value at 39.776 and its Partial Eta Squared at 0.070. In other words, the existence of a nomination committee (NCOM) correlates positively with L\_MTBV, and accounts for 7% of the changes in firm performance during 2004 - 2010. The p value of DUAL becomes significant at 0.014 ( $p < 0.05$ ) with the presence of GFC and its interaction term, at 95% confidence level with F value at 6.017. DUAL's effect on L\_MTBV increases with the moderation effect of GFC as its Partial Eta Squared increases from 0.005 to 0.011 (Table 4.11, Table 4.13). GFC is highly significant with its p value of 0.005 and Partial Eta Squared of 0.015. The interaction term GFC\_DUAL is also significant with p value at 0.033, F value at 4.566 and Partial Eta Squared at 0.009. This is indicative of quasi-moderation as the

moderator affects the correlation of independent variable and dependent variable and also has its own effect on the dependent variable.

Source	F	Sig.	Partial Eta Squared	Observed Power
<b>Full Sample</b>				
Corrected Model	27.584	0.000	0.365	1
Intercept	113.786	0.000	0.178	1
GFC	7.919	0.005	0.015	0.802
GFC_DUAL	4.566	0.033	0.009	0.569
IND	0.440	0.508	0.001	0.101
L_BSIZE	0.731	0.393	0.001	0.137
L_CR	12.727	0.000	0.024	0.945
L_1_DE	21.000	0.000	0.038	0.996
L_HIST	14.493	0.000	0.027	0.967
L_MC	1.612	0.205	0.003	0.245
L_TA	40.943	0.000	0.072	1
NCOM	39.776	0.000	0.070	1
DUAL	6.017	0.014	0.011	0.687
R SQUARED = 0.365 (ADJUSTED R SQUARED = 0.352)				

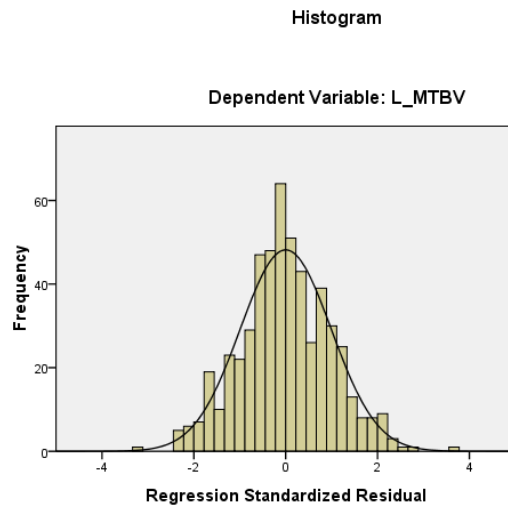
**Table 4.13** ANCOVA Results with the Interaction terms GFC and GFC\_DUAL for the Full Sample, 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

In addition to ANCOVA, linear regression analyses by ANOVA are performed with the addition of the suspected moderator GFC and its interaction term with DUAL, i.e. GFC\_DUAL (Table 4.14). The multiple correlation coefficient, R statistics rises slightly for the full sample for 2004 - 2010. The explanatory power for the dependent variable, L\_MTBV further improves with the addition of GFC and GFC\_DUAL. The overall F-statistics remain significant at alpha level of 0.05. The null hypothesis is thus rejected and the independent variables are correlated with the dependent variable.

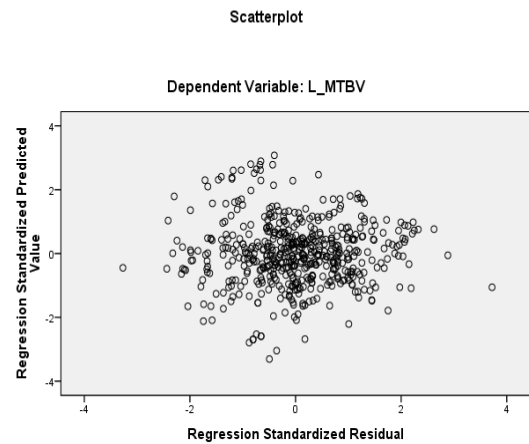
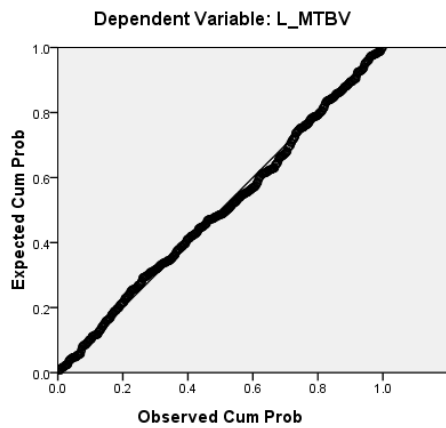


Multicollinearity does not affect the regression as VIFs of all the variables are less than 10, condition index is less than 30 and most of the Eigenvalue is less than 1. It also meets the assumptions for linear regression: the histograms of residuals are normally distributed. The straight line under the normal probability plot and the scattered variables with little thickening in the scatterplot, are suggestive of a normal and linear set of data (Figure 4.12).

Stepwise regression is performed manually by removing IND, L\_BSIZE, and both IND and L\_BSIZE. This exercise does not help improve the significance of the variables of interest: DUAL, GFC or GFC\_DUAL. Thus, IND and L\_BSIZE are kept in the model to better understand their direction of effect on L\_MTBV, in case they become significant under different conditions of linear regression.



Normal P-P Plot of Regression Standardized Residual



**Figure 4.12** Histogram, Stem and Leaf Plot and Normal Probability Plot of L\_MTBV with the Effect of GFC of the Full Sample for 2004 - 2010

Model	Unstandardised Coefficients	Sig.
Full Sample	B	
(Constant)	-1.686	0
DUAL	-0.078	0.014
GFC	0.053	0.005
GFC_DUAL	0.106	0.033
IND	-0.048	0.508
L_BSIZE	0.074	0.393
L_CR	0.103	0
L_1_DE	-0.333	0
L_HIST	0.136	0
L_MC	-0.032	0.205
L_TA	0.214	0
NCOM	0.108	0

**Table 4.14** ANOVA Results with the addition of GFC and the Interaction Term

GFC\_Dual of the Full Sample for 2004 - 2010; Dependent Variable: market-to-book value (L\_MTBV)

With the introduction of GFC alone, all the significant variables, e.g. L\_CR, L\_1\_DE, L\_HIST, L\_TA and NCOM maintain their p values below 0.05, contributing to the prediction of firm performance. On the other hand, the insignificant variables, e.g. IND, L\_BSIZE, L\_MC continue to have high p values. Nonetheless, the p value of DUAL reduces to 0.014, significant at 95% confidence level when GFC\_DUAL appears together with GFC in the model (Table 4.14). In other words, DUAL becomes significant with effects on L\_MTBV in the presence of GFC and GFC\_DUAL. The p values of GFC at 0.005 and GFC\_DUAL at 0.033 are significant at alpha level of 0.05. GFC is thus a quasi-moderator of DUAL for the whole set of final data because GFC is significant and exerts effect on firm performance on its own. The Partial Eta Squared of GFC is 0.015 with a 1.5% contribution to the changes of L\_MTBV and a strong observed power of 0.802 (Table 4.13).

The details of the final model: alpha intercept ( $\alpha$ ) of Y when independent variables are zero for the regression is -1.686. The unstandardised B values of the predictors of the linear regression are the slopes ( $\beta$ ) or the coefficients of the independent variables and covariates obtained from the ANOVA Table of Coefficients (Table 4.15).

<b>Model</b>	<b>Unstandardised Coefficients</b>
<b>Full Sample</b>	<b>B</b>
Y Intercept (Constant)	-1.686
DUAL	-0.078
GFC	0.053
GFC_DUAL	0.106
L_CR	0.103
L_1_DE	-0.333
L_HIST	0.136
L_TA	0.214
NCOM	0.108

**Table 4.15** Unstandardised B Value for the significant independent variables of the Regression Model for 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

#### 4.5.3 Linear Regression Results for H-shares, 2004 – 2010

Table 4.16 presents the regression coefficients for the sub-group of H-shares in the absence of GFC. The regression model is estimated using data for 2004 – 2010. The dummy variable of IND for financial firms is excluded from the model since the final sample of H-shares does not contain financial firms. The results suggest that all but CEO duality and market capitalisation have a statistically significant effect on firm performance. CEO duality is statistically insignificant with a p-value of 0.430.

NCOM and the covariates are significant for the sub-group. Predictor L\_MC, however, continues to be insignificant with p value at 0.172.

GFC and its interaction term with DUAL are introduced into the ANOVA to measure possible moderation. The p-value of DUAL is greatly reduced to 0.147 (Table 4.17). GFC is insignificant with p value at 0.179 at alpha level of 0.05 or 0.1. Nonetheless, GFC\_DUAL is significant at 90% confidence level. Thus, GFC is a pure moderator of CEO duality in its relationship with firm performance for the H-shares during 2004 – 2010 at 90% confidence level. In other words, the effect of CEO duality on firm performance is positively moderated by the global financial crisis at the 10% level of significance.

<b>Model</b>	<b>Coefficients</b>	<b>Sig.</b>
<b>H-Shares</b>	<b>B</b>	
(Constant)	-1.346	0
DUAL	-0.021	0.43
L_BSIZE	-0.343	0
L_CR	0.135	0
L_1_DE	-0.254	0
L_HIST	0.427	0
L_MC	0.035	0.172
L_TA	0.132	0
NCOM	0.096	0

**Table 4.16** ANOVA results of H-shares for 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

<b>Model</b>	<b>Coefficients</b>	<b>Sig.</b>
<b>H-Shares</b>	<b>B</b>	
(Constant)	-1.398	0
DUAL	-0.049	0.147
GFC	0.029	0.179
GFC_DUAL	0.085	0.096
L_BSIZE	-0.326	0.001
L_CR	0.129	0
L_1_DE	-0.239	0.001
L_HIST	0.375	0
L_MC	0.059	0.029
L_TA	0.082	0.023
NCOM	0.104	0

**Table 4.17** ANOVA Results of H-shares with the Interaction terms GFC and GFC\_DUAL for 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

#### 4.5.4 Linear Regression Results for Red-chips during 2004 – 2010

Table 4.18 presents the ANOVA results for the Red-chips sub-group with L\_MTBV as the dependent variable for the period of 2004 - 2010. For the sub-group of 196 Red-chips, DUAL is insignificant at alpha level of 0.05 or 0.1 for the period of 2004 – 2010 with p value of 0.195 (Table 4.18). Predictors, industry type (IND), debt to equity ratio (L\_1\_DE), firm history (L\_HIST) and nomination committee (NCOM) become insignificant for this sub-group. ANOVA is again processed with the introduction of GFC and its interaction with DUAL. IND, L\_1\_DE, L\_HIST and NCOM remain insignificant whereas L\_BSIZE and L\_CR maintain their significance in the presence of GFC and GFC\_DUAL (Table 4.19). P value of DUAL greatly reduces to close to 0.05 ( $p = 0.052$ ). Both GFC and GFC\_DUAL are significant with

p value at 0.016 and 0.035 respectively, implying that GFC is again a quasi-moderator of CEO duality on firm performance for the Red-chips during 2004 - 2010.

<b>Model</b>	<b>Coefficients</b>	<b>Sig.</b>
<b>Red-Chips</b>	<b>B</b>	
(Constant)	-2.735	0
DUAL	-0.060	0.195
IND	0.023	0.77
L_BSIZE	0.573	0
L_CR	0.170	0.004
L_1_DE	-0.216	0.176
L_HIST	-0.038	0.49
L_MC	-0.195	0
L_TA	0.448	0
NCOM	0.027	0.469

**Table 4.18** ANOVA Results for Red-chips during 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

<b>Model</b>	<b>Coefficients</b>	<b>Sig.</b>
<b>Red-Chips</b>	<b>B</b>	
(Constant)	-2.577	0
DUAL	-0.109	0.052
GFC	0.073	0.016
GFC_DUAL	0.185	0.035
IND	0.046	0.556
L_BSIZE	0.606	0
L_CR	0.139	0.016
L_1_DE	-0.183	0.238
L_HIST	-0.076	0.16
L_MC	-0.184	0
L_TA	0.419	0
NCOM	0.024	0.513

**Table 4.19** ANOVA Results with GFC and the Interaction terms GFC\_DUAL for Red-chips during 2004 – 2010; Dependent Variable: Log of market-to-book value (L\_MTBV)

In summary, Table 4.20 presents the t-statistics of CEO duality (DUAL) and the moderation effects of GFC on DUAL for the final 539 company data during 2004 – 2010. Without GFC, CEO duality is not a significant predictor of firm performance for the full sample, H-shares and Red-chips sub-groups at alpha level of 0.05. With the presence of GFC, the p values of DUAL are greatly reduced and DUAL becomes significant for the full sample and Red-chips at alpha level of 0.05 and 0.1 respectively. Even though CEO duality affects overall firm performance in the presence of GFC, its contribution is relatively small (1.1%) with low Partial Eta Squared scores at 0.011 (Table 4.13). The p values and type of moderation are summarised in Table 4.21. Both GFC and its interaction term with CEO duality (GFC\_DUAL) are significant explanatory variables of Log of market-to-book ratio (L\_MTBV) for the full sample and the Red-chips. In other words, GFC serves as a quasi-moderator for the full sample of the Chinese companies and the Red-chips firms during the studied period. H-shares do not share similar findings. None of the CEO duality, GFC or their interaction (GFC\_DUAL) achieves significance at 95% confidence level. However, GFC\_DUAL is significant at alpha level of 0.1 (Table 4.21). Pure moderation effect of GFC for H-shares sub-group exists during 2004 – 2010.

DUAL	Sample Size, N	L_MTBV	
		p-value (sig.)	
		With GFC	Without GFC
Full Sample	539	0.014	0.099
H-Shares	343	0.147	0.43
Red-Chips	196	0.052	0.195

**Table 4.20** The P Values of DUAL with and without the Moderation Effect of GFC for 2004 - 1010



	Sample Size, N	p-value (sig.)		GFC as Moderator 2004 - 2010
		GFC	GFC_DUAL	
Full Sample	539	0.005**	0.033**	Quasi-moderator
H-Shares	343	0.179	0.096*	Pure Moderator
Red-Chips	196	0.016**	0.035**	Quasi-moderator

\*\* significant at the 5% level; \* significant at the 10% level.

**Table 4.21** The Significance and Moderation Effect of GFC of the Full Sample, H-shares and Red-chips Sub-groups for 2004 – 2010

## 4.6 HYPOTHESES TESTING

This section presents the testing of the hypotheses of the effect of CEO duality on firm performance and the impact of the GFC on the firm performance of the Chinese companies listed in Hong Kong.

The p value of CEO duality (DUAL) on firm performance (L\_MTBV) is 0.014 for the full sample in the presence of GFC. It is significant at 95% confidence level (Table 4.20). Its coefficient however, is negative (-0.078), representing adverse impact on firm performance (Table 4.15). Consistent results are also obtained for the Red-chips sub-group with significant p value (0.052) of CEO duality and negative coefficient (-0.109) on firm performance (Table 4.19). This is in line with the alternative hypothesis ( $H_{A,1}$ ) that CEO duality *negatively* affects firm performance of the HK-listed Chinese firms.

On the other hand, H-shares are found to display different results. For these shares,

the null hypothesis that CEO duality does *not* affect performance of the HK-listed Chinese firms cannot be rejected at the 5% significance level. This is probably due to the effect of agency theory off-setting that of stewardship theory.

Paired-sample t-test is used to measure the difference between means of the same group of companies over different periods of time. At 99% confidence level, firm performance within the full sample and within the sub-groups during 2008 – 2010 is significantly higher than that during 2004 – 2007 (Table 4.9). The p values for the H-shares and Red-chips sub-groups are 0.00 (Table 4.8).

According to the summary results of ANOVA in Table 4.20, CEO duality (DUAL) becomes significantly related to firm performance indicator, L\_MTBV, in the negative direction, in the presence of GFC and its interaction. After controlling for the effect of the covariates, the p values are significant for the final 539 data set and for the Red-chips sub-group, but not for the individual H-shares sub-group.

GFC and the interaction term GFC\_DUAL have positive coefficients and thus improve firm performance (Table 4.14). GFC is found to be a quasi-moderator of DUAL both for the full sample and the Red-chips sub-group and a pure moderator of H-shares. This is in support of the hypothesis that the GFC *positively* moderates the relationship between CEO duality and firm performance at 95% confidence level.

Contrary to the general belief that firm performance would suffer during a financial crisis, the Chinese H-shares and Red-chips fare much better during the period of the GFC in 2008 - 2010 compared to that of 2004 – 2007 (Table 4.9). In 2008 – 2010, the

quantitative easing Programs initiated by the US government and similar easing of monetary and fiscal policy concerted by governments worldwide, not only significantly improved financial market liquidity with low interest rates, but also helped China to maintain its export earnings. The loosening of monetary policy and the encouragement of domestic consumption, by the Chinese Government, with subsidies on the purchase of motor vehicles, petrol and white goods as of 2008, fuelled the economy of China with a rapid growth in GDP at a rate of over 9% for the period. This helped push up significantly the overall sales and performance of the HK-listed Chinese firms that had their core business in China during 2008 – 2010, even in the midst of the global financial crisis.

## **4.7 SUMMARY**

This chapter explains firm performance in terms of indicators of corporate governance and other firm-specific factors. An ANCOVA model is used to complement our regression analysis. ANCOVA analyses are useful in determining the proportion of the variance in firm performance explained by a particular covariate, after taking into account effects of other covariates. As expected, CEO duality and debt-to-equity ratio have negative effect on firm performance whereas GFC and its interaction with CEO duality, firm history, and in particular firm size indicators such as total assets, and the existence of nomination committee could improve firm performance. The effect of industry type and Board Size on the firm performance indicator is insignificant at 90% or 95% confidence level.

Instead of suffering from the GFC, the Chinese firms fare very well. Indeed, the performance of H-shares and Red-chips during 2008 – 2010 surpasses that of 2004 – 2007 according to the results of the paired sample t-tests. However, the marginal difference in performance between the periods is not statistically significant. On the other hand, the mean difference between 2004 and the period after the instigation of the HK-CG Code is large and highly significant. There is significant difference in performance between firms of H-shares and Red-chips, both in 2004 – 2007 and 2008 – 2010 using independent t-test at 95% confidence level (Table 4.7). H-shares outperform Red-chips for both periods by a large degree, especially during 2004 – 2007.

CEO duality does not significantly affect performance of Chinese firms, both H-shares and Red-chips, at 95% confidence level, during 2004 – 2010. Nevertheless, in the presence of GFC, CEO duality has significant and negative impact on firm performance for the whole sample as well as for Red-chips, but its effect on H-shares is not significant. On its own, GFC also has significant effect on firm performance for both the full sample and Red-chips. Its effect, however, is not significant for H-shares. It is thus a quasi-moderator of CEO duality both for the full sample and the Red-chips sub-group and a pure moderator for H-shares.

## **CHAPTER FIVE**

### **CONCLUSION**

#### **5.1 INTRODUCTION**

This dissertation seeks to measure the effect of CEO duality and the recent global financial crisis on performance of HK-listed Chinese firms. A sample of 77 H-share and Red-chip Chinese SOEs listed on the main board of HKEx is chosen for empirical analysis. The empirical results are presented in the previous chapter. The key findings are discussed in the following sections. The differences between H-share and Red-chip firms in terms of performance is highlighted, and the theoretical and practical implications are explored. In addition, the impact of global financial crisis on Chinese firms listed in Hong Kong is examined. The limitations of the study and its methodology are also noted together with suggestions on future research.

#### **5.2 MAJOR FINDINGS**

The empirical model presented in Chapter 4 explains 36.5% of the variation in firm performance. There appears an upward trend in firm performance of the Chinese companies during 2004 - 2010. According to the ANOVA results for the full sample,

CEO duality is found to have a negative effect ( $\beta = -0.078$ ) on firm performance. On the contrary, the global financial crisis has a positive but small effect ( $\beta = 0.053$ ) on firm performance. The effect of industry type (financial vis-à-vis non-financial firms) on firm performance is not statistically significant. On the other hand, board size is insignificant and does not have an effect on firm performance for the full sample of the Chinese firms. Nevertheless, it is quite significant for the sub-groups of H-shares and Red-chips with contrasting negative and positive effect, respectively. As expected, the setting up of a nomination committee, has a small positive ( $\beta = 0.108$ ) and highly significant effect on firm performance of the full sample and H-shares, but not for Red-chips. Firm liquidity and firm size (measured in terms of log of total assets) are found to have a positive and significant effect on firm performance for the full sample as well as for the sub-samples of H-shares and Red-chips. Firm history also has a positive ( $\beta = 0.136$ ) and significant effect on the full sample and H-share companies, but its direction of effect for Red-chips is negative. Their choice as control variables for the research model is thus justified.

The earlier studies are inconsistent in their findings of the impact of total assets, market capitalisation and net sales on firm performance (Cheung et al., 2007 and Yermack, 1996). This study finds that debt to equity ratio has a negative impact ( $\beta = -0.333$ ) on firm performance in case of the full sample and Red-chips. The log of market capitalisation exerts significant positive influence on firm performance in the presence of the GFC dummy variable for the full sample as well as for H-shares.

An overview of the detailed analyses of the empirical results of the proposed research model from Chapter Four is presented in what follows. The two main research

hypotheses on the impact of CEO duality on firm performance and the moderation effect of the GFC on their relationship are discussed.

### **5.2.1 Effect of CEO Duality on Firm Performance**

CEO duality is not common amongst the HK-listed Chinese firms. There is a similar proportion of CEO duality amongst H-share companies and Red-chips. Nine out of the total 49 H-shares (18.37%) and five out of the total 28 Red-chips (17.86%) had CEO duality during 2004 – 2010 (Table 4.3).

The first hypothesis tests if CEO duality affects their firm performance. In the absence of GFC, regression analyses suggest that CEO duality (DUAL) does not significantly affect firm performance (L\_MTBV) with p values at 0.099, 0.43 and 0.195 respectively for the full sample, the H-shares and Red-chips, at 95% confidence level (Table 4.20). This supports the hypothesis that CEO duality does *not* affect firm performance of the HK-listed Chinese firms.

However, once the impact of the global financial crisis is accounted for, CEO duality becomes highly significant for the full sample and Red-chips with p values at 0.014 and 0.052 respectively (see Table 4.14). A negative coefficient (-0.078) of DUAL represents a negative effect of the dummy variable of CEO duality. Thus the result supports the hypothesis that CEO duality *negatively* affects performance of the HK-listed Chinese firms and Red-chip companies, which is in line with agency theory. In contrast, sub-group analysis finds that there is no effect of CEO duality on firm

performance for H-share companies. The effect of agency theory is probably offset by that of stewardship theory. The direction of the CEO duality effect is a priori indeterminate. In other words, the findings echo the recently advocated contingency theory that the effect of board leadership on firm performance is dependent on the external environment factor of GFC (Boyd, 1995; Kwok, 1998; Peng et al, 2007).

### **5.2.2 The Effect of Global Financial Crisis on the Relationship between CEO Duality and Firm Performance**

On its own, GFC affects firm performance both for the full sample and the Red-chip firms, significantly, at 95% confidence level with p values at 0.005 and 0.016 respectively (Table 4.21). The direction of effect of GFC is positive suggesting an unexpected phenomenon, namely, that a financial crisis of global scale surprisingly improves the performance of the Mainland Chinese firms. This empirical finding confirms that the attempt by the Chinese government to reverse the action of the worsening economic situation with its monetary and fiscal stimuli was successful, at least for the first 3 years (2008 – 2010), immediately after GFC. Once again, H-share firms differ from the full sample and Red-chips as neither CEO duality nor GFC on its own affects firm performance. Nonetheless, the interaction of GFC and CEO duality *does* affect their performance, suggesting a pure moderation effect of GFC on the relationship between CEO duality and firm performance. The direction of the effect of GFC and its interaction with CEO duality on L\_MTBV is consistently positive for the full sample and the sub-groups. In other words, these empirical findings support  $H_{A,2}$ :



Global financial crisis *positively* moderates the relationship between CEO duality and firm performance.

## **5.3 IMPLICATIONS OF THE RESULTS**

This section discusses the implications of the results. CEO duality consistently curbs firm performance for the Chinese firms, with or without GFC. In contrast, GFC demonstrates a positive effect on firm performance for all the Chinese firms and the sub-groups. Does the empirical evidence of this study reinforce the agency theory and the preference of regulatory bodies with regard to board leadership structure?

### **5.3.1 Theoretical Implications**

As a result of the separation of ownership and control of modern firms, agency theory raises the question on manager's motivation and the possible agency costs on the firms (Jensen and Meckling, 1976; Jensen, 1993). CEO duality is often seen as a potential source of principal-agent problems, with the powerful leader following self-interest at the expense of the firm. Stewardship theory, on the other hand, asserts that managers could be good stewards, taking care of the interest of their principals and benefiting their firms. In general, the agency view is widely adopted by regulatory authorities worldwide. Since the 1990s, the Chinese government has been pushing to raise the CG standards of listed companies. CEO duality has since become uncommon amongst Chinese SOEs. Monitoring and internal controls are important to minimise

self-serving human behaviour. This is particularly evident in SOEs with the close monitoring and participation of Party officials from the State and the Province, both at managerial and board level. In addition to the regulatory authorities and political bodies, informal channels of complaint from the public and the press are also playing an important part to influence company leaders in both their public and private behaviour (Tian and Lau, 2001).

The resource-dependence theory and, partly, contingency theory, focus on the relationship between firms and their environment. Board leaders have to access critical resources in a dynamic environment. The drive of the board moves beyond monitoring to increasing the firm's legitimacy, in order to reduce environmental uncertainty (Pfeffer, 1972; Pfeffer and Salancik, 1978). Resource-dependency theory thus proposes that a 2-tier leadership structure benefits firms by providing additional knowledge, expertise and network contacts, which could be vital to firms at times of crisis, characterised by a high degree of uncertainty. In contrast, contingency theory proposes that firm performance could be subject to both internal and external factors, and it does not carry a strong view on the direction of the effect of the board leadership structure in this case.

At first glance, CEO duality is not significant in its impact on firm performance of the Chinese firms, the H-shares and Red-chips sub-groups. This is confirmed by the regression analysis of this empirical study after controlling for the effect of the other variables, in the period of 2004 - 2010. CEO duality does not significantly affect firm performance of the Chinese firms and the two sub-groups at 90% confidence level. It neither supports agency nor stewardship theory. This is also in line with some of the

recent empirical studies (Brickley et al., 1997; Lam and Lee, 2008; Peng et al., 2007).

Nonetheless, duality, in the presence of GFC, negatively impacts firm performance across the Chinese companies. Under statistical regression analysis, CEO duality shows its negative effect on firm performance with the additional effect of GFC and its interaction with CEO duality amongst the full sample, the H-shares and Red-chips at 95% confidence level. GFC is thus a moderator of CEO duality. P value of duality is greatly reduced for the listed Mainland companies and the sub-groups of H-shares and Red-chips. In summary, GFC is found to be a quasi-moderator of duality both for the full sample and the Red-chips sub-group and a pure moderator for H-shares. In other words, the effect of CEO duality on firm performance is contingent on external events such as a global financial crisis and possibly resulting government policies and stimulus programmes. It may reduce access to critical resources required to minimise uncertainty for firms, thus negatively impacting firm performance during a global financial crisis. The empirical results thus support both resource-dependence and contingency theory and findings of similar CG research (Lam and Lee 2008; Peng et al., 2007).

On a side note, the lack of an independent nomination committee is often perceived as a source of cronyism. The setting up of a nomination committee is found to have a positive and highly significant effect on firm performance for the full sample and H-shares, with or without the presence of GFC. The research finding of this dissertation supports the agency notion that the presence of a nomination committee has a positive effect on firm performance.

### **5.3.2 Implications for Corporate Governance and Regulations**

In general, academics and regulatory bodies prefer a two-tier system separating board leadership from senior management. This could reduce the concentration of power in one person and the risk of abuse of power. CEO duality is thus viewed as one of the stumbling blocks in the development of corporate governance. It is assumed that better CG practice could translate into improved firm performance. The empirical finding of this research neither supports nor refutes the importance of CEO duality in its effect on firm performance. At first glance, it does not seem to lend support to the belief of regulatory bodies that agency theory plays an important part in the management of corporations. There is little financial incentive for the Chinese firms to adopt either structure of corporate leadership, even though CEO duality is not common amongst the group of Chinese enterprises.

Empirical results, however, become very different with the presence of GFC. During crisis, CEO duality becomes significant and negatively impacts firm performance in the period of 2008 - 2010. The effect of CEO duality is thus contingent on the external environment. This is exactly what the regulators are trying to safeguard firms and investors from, the negative effect of a single-tier leadership structure. In conclusion, this empirical research confirms the regulatory bodies' concern that CEO duality could be harmful to CG and firm performance, particularly in times of crisis.

The positive effect of GFC on the performance of Chinese companies during 2008 – 2010 is surprising. Contrary to the expectation that companies would suffer badly in a

period of financial crisis of global scale, the Chinese firms instead fared very well during the GFC in 2008 - 2010. Indeed, their performance during 2008 – 2010 surpassed that of 2004 -2007, though the p value is high (0.496) at 95% confidence level. Nonetheless, this could be understood when the Quantitative Easing Programmes concerted by governments worldwide, including China, in 2008 – 2010, are taken into consideration. In addition, Chinese SOEs tend to receive preferential access to bank loans during financial crisis (Liu 2012). The loosening of monetary and fiscal policy not only significantly improved financial market liquidity and credit access with low interest rates, but also helped to maintain China's exports. This helped push up significantly, the overall sales and performance of the HK-listed Chinese firms that had their core business in China during 2008 – 2010 despite the Global Financial Crisis.

China learnt significantly from dealing with the 1997 Asian Financial Crisis. The Chinese government responded quickly to the GFC by lowering its interest rate via monetary policy. In November 2008, the Ministry of Finance of China announced the US\$586 billion (4 trillion Chinese yuan, ¥) stimulus package as part of its fiscal policy, just before the G-20 Summit (Barboza, 2008). The stimulus package was much more aggressive than expected. Even though most of the money drew from existing spending, it provided a strong psychological boost to Chinese consumers and firms. The encouragement of domestic consumption by the Chinese government, with subsidies on the purchase of motor vehicles, petrol and white goods as of 2008, fuelled the economy of China. In general, China emerged unscathed from the GFC in 2008 - 2010. Its GDP maintained a relentless growth of over 9% in 2008 and 2010. The financial system in China remained relatively closed. Most of the major banks in

China had just raised fresh capital from their recent sizeable public listings in Hong Kong a few years before the GFC. The Chinese government imposed stringent requirements on the adequate level of reserves for financial institutions and their expansion overseas. This shielded the banks from the acquisition of toxic assets in any large scale. Leveraging was not excessive, and derivatives were not popular in China. Banks had a good margin for the retail market, which was vibrant as Chinese consumers have a greater propensity to save. The banks only had limited exposure to the debts and the over-leveraged derivative products of the US and Europe.

In addition, the Chinese yuan stopped pegging with the US dollar, from 2005. RMB appreciated over the years by as much as 21% against the US dollar and thus the Hong Kong dollar, from HKD 0.94 in 2005 to HKD 1.14 on 16<sup>th</sup> September 2008, the day after the collapse of Lehman Brothers. The appreciation of the Chinese yuan persisted throughout 2008 – 2010 with mounting political pressure from the US and the EU. This helped to boost the sales performance of the HK-listed Chinese firms in HKD as over 50% of their incomes are from China in RMB yuan, by definition. These H-shares and Red-chips are traded on the main board of HKEx in Hong Kong dollars, but financial statements for H-shares are reported in yuan instead. This could explain some of the differences in empirical findings between H-shares and Red-chips.

As a result of the Chinese government's monetary and fiscal stimuli, the HK-listed Chinese firms performed significantly better during 2008 – 2010, compared to that in 2004 – 2007 for the full sample, H-shares and Red-chips at confidence level of 99%. On the other hand, the empirical results of this study support the effectiveness of the HK-CG Codes in improving firm performance. There is significant improvement of

firm performance ( $p$  value = 0.000) for the period of 2005 – 2010 subsequent to the implementation of the HK-CG Codes versus that of 2004, but this may not be related to the interested variable of CEO duality, as its presence does not reduce after 2005.

## **5.4 LIMITATIONS**

There are limitations to this study in terms of scope, sample and methodology that need to be highlighted. This study focuses only on the effect of the global financial crisis on the relationship between firm performance and board leadership structure of the Chinese firms listed in Hong Kong during 2004 - 2010. The group of Mainland firms comprises some of the best Chinese SOEs chosen for listing, preparing to compete with multinational corporations, both at home and abroad. Above all, board leadership of Chinese SOEs may not be chosen or appraised on the merits of performance as it is often a political appointment. The context of unique Chinese realities, which is a mix of a market and a central planning economy, may be a niche as well as a limitation of this dissertation. The results may not be transferable to other groups of listed companies in Hong Kong and abroad.

It is nevertheless a challenge to predict firm performance, which hinges on a diversity of internal and external factors: economic environment, competition, industry nature and firm-specific organisational issues like marketing, human resources and information technology strategies that impinge on firm performance (Hansen and Wernerfelt, 1989). Taking the controls and independent variables into consideration,

their changes in this study only account for about one third of the variance of the firm performance indicator, MTBV ( $R^2 = 0.344$ ).

On the other hand, corporate governance is multi-dimensional with many inter-related issues such as board composition, board size, firm age and size. There is an assumption that better CG practice, like leadership structure, could translate into better firm value and performance. Similar to earlier studies, this research attempts to evaluate the relationship of CEO duality with firm performance, by measuring only the financial aspect using MTBV or Tobin's Q, and accounting ratios. However, there are fundamental deficiencies with most duality studies as firm performance is treated as the primary outcome of the effect of CEO duality, overlooking a whole host of variables of costs and benefits when comparing the two different leadership structures. This is like evaluating the contribution of an additional department head working with the top salesperson of a firm, solely by assessing the change in financial performance of the department alone. The use of a comprehensive assessment tool like 'balanced scorecard' or key performance indicators (KPI) would be a more integrated approach. There are both quantitative and qualitative, as well as economic and social, benefits and costs to measure. Naturally, the results of duality studies are mixed because firm performance, as only part of the equation, is studied. In fact, risk and 'non-economic' factors of performance are also important considerations. Having an extra board Chair may reduce business risk, improve networking, reduce agency cost of the CEO, enhance innovation and re-energise the corporation, which may not necessarily be reflected in accounting figures alone.



The use of a regression model for the study of time series panel data has its limitations. The time trend effect on the data is missing. The effect of time may not be stationary at all. In other words it is not unaffected by the factor of time. The use of an econometric method like EViews could be a better alternative to handle the time series panel data. In order to meet the stringent assumptions of the regression methodology, a significant portion of the data is removed to ensure the reliability and quality of the sample and thus the results of the study. Even though the sample is significantly large with 539 panel data from 77 Chinese companies, accounting for over 50% of the population, it is nonetheless much reduced from the population of 141 Chinese companies. Indeed, there have been a large number of sizeable IPOs of Chinese firms since 2004. Moreover, the number of Chinese firms with CEO duality is relatively small, especially for the sub-groups. Above all, the dissertation only covers the first three years of the GFC and its full effect remains to be seen. This tends to affect the reliability and credibility of the results of the dissertation.

There are limitations of the research that warrant our attention. The scope of this study is focused on board leadership structure of the Mainland firms listed in Hong Kong. Most of these firms are state-owned or controlled enterprises. Board leadership of Chinese SOEs may not necessarily be driven by firm performance, as it is often a political appointment. The context of Chinese realities and local business environment may be a niche as well as a limitation of this study. Only 77 Chinese firms listed in the HKEx are included in the study. Neither the whole population of the Hong Kong listed companies nor the whole population of Chinese corporations listed in PRC or abroad are represented. The study is small-scale with a specific group of corporations, and there is an external reliability concern. The results may not be able to be

generalised to other groups of listed companies in Hong Kong or abroad, as cautioned by Dalton et al. (1998) in their meta-analysis.

The choice of control variables is not exhaustive because there are possibly huge numbers of factors that impinge on firm performance (Yu and Yang, 2011). From agency theory perspective, a firm's external environment is just as important as the ownership concentration in considering the correlation (Yu and Yang, 2011). Within the limited resources of this dissertation, the exogenous factors, such as government policies favouring a particular group of companies, are excluded from the study.

Future research could include the over 600 non-SOEs Chinese companies that have gone public since 2004. The large number of these non-SOEs could have very different firm characteristics and ownership structure to the sample of H-share and Red-chips. The results may look very different if they are also included in the study.

Both quantitative and qualitative research have rich traditions from multiple disciplines. Each functions within different assumptions. The positivistic method of this research has its intrinsic weaknesses. Its assumption of an objective truth that could be reproduced may not necessarily hold true. It is not an in-depth analysis with an exhaustive list of variables. There are variables not included in the study, which may affect the outcome of the analyses. They could be political, cultural or social factors that significantly affect the performance of some of the companies within this group of Chinese firms.

It is assumed that the secondary financial data is usually accurate and correct. But,

financial earnings could be subjected to possible management manipulation (Tsui and Gul, 2000). The lack of financial disclosure and transparency could encourage managers to act opportunistically. Corporate governance is important to redress fundamental agency problems. The Chinese “Generally Accepted Accounting Procedures” (GAAP), gives managers the latitude in their choice of accounting methods and procedures. Nevertheless, there has not been evidence that earnings manipulation is common amongst the researched subjects of HK-listed Chinese firms.

## **5.5 SUGGESTIONS FOR FURTHER RESEARCH**

The GFC continues to threaten the world economy. Despite the quantitative easing programmes, the effect of the GFC is still on-going and its impact is spreading from the US to Europe and worldwide. The ever-changing economic and political scene since 2010, as a result of the GFC, suggests future research may be undertaken to take a longer term view and examine whether the effects of corporate governance are moderated by different phases of the GFC. Only in this way could the effect of the GFC be fully reflected and properly assessed. Indeed, the Chinese government started to tighten its monetary and fiscal policy as inflation and speculative activities on food, property and commodities went rampant in 2010 and 2011. The reversing of the monetary policy and financial liquidity puts heavy strains on Chinese businesses, especially for SMEs with limited access to credit financing, at a time of declining export demand from the US and Europe. The lasting effect of the GFC on the performance of Chinese firms remains to be seen.

There have been a large number of sizeable Mainland firms, both H-shares and Red-chips, listed on the main board of Hong Kong since 2004, accounting for more than half of the total market capitalisation of all the HK-listed companies by 2009 (HKEx, 2009). The regression results may differ with a much larger sample. In fact, earlier studies (Abdullah, 2004; Daily and Dalton, 1997; Rechner and Dalton 1991) did not use multivariate regression to measure the effects of CEO duality on firm performance indicators.

A nomination committee is also found to have a significant effect on firm performance. In fact, its effect far exceeds that of CEO duality as it is often a useful CG vehicle to promote the proper election and thus, independence, of the board of directors. Unfortunately, close to half of the HK-listed firms do not have a nomination committee. Chinese firms are often blamed for their lack of independence and transparency of board membership. In the literature review, it is realised that there is a lack of research on the relationship between existence of a nomination committee and Chinese firm performance. Is GFC also a moderator of nomination committee of Chinese firms? It is thus an important area of corporate governance of Chinese firms that deserves future research. In order to improve the explanatory power of the model, future studies could also include other important CG variables such as: proportion of outside directors or number of independent committees.

## 5.6 SUMMARY

The global financial crisis has captured the recent attention of World communities. Its impact reaches most people worldwide and significantly affects firms in unprecedented magnitude. Contrary to the belief that a global financial crisis would dampen firm performance, the GFC, on its own, had a significant and positive effect on the performance of Chinese firms, including both H-share and Red-chip companies. In addition, the GFC has had a positive quasi moderation effect on the relationship between CEO duality and performance of Chinese firms. This is likely due to the State's preferential credit treatment towards the H-share and Red-chip SOEs. The unparalleled monetary easing and fiscal stimulus programmes of the Chinese government helped promote growth, employment, stability and social harmony, as the Communist Party celebrated its 60<sup>th</sup> year of ruling in 2009. It is suggested that a growing Chinese economy could also help stabilise that of the neighbouring Asian countries of Japan and Korea (Liew, 2009).

There appears to be a lack of financial incentive for Chinese firms to adopt a 2-tier leadership, as the empirical evidence of this study on CEO duality does not lend support to either agency or stewardship theory alone. In crisis, the presence of CEO duality starts to demonstrate significant and negative effect on firm performance. This is in line with the generally accepted view of regulatory authorities and government bodies that segregation of board leadership from management is an effective corporate governance practice to reduce agency cost, at times of crisis in particular. The empirical findings of this dissertation are also in favour of contingency theory that the effect of CEO duality on the performance of HK-listed Chinese firms is

situational on environmental dynamism and resource scarcity during global financial crisis. This is probably due to the ability of firms with both CEO and COB to respond prudently and collaboratively to the global financial crisis and opportunities presented by economic stimulus policies of the Chinese government during 2008 - 2010.

The field of CG is young and there is much that can be done to add to the understanding. CG in China presents a unique agency problem as large numbers of listed or sizeable Chinese firms are still in the hands of the State. The objectives of these firms may often differ from those of the free market. Political agenda, such as employment levels and social stability, may dictate the firm's business decisions (Bai et al., 2003; Clarke, 2003 – Liu 2012). In terms of company law, securities regulation, the code of corporate governance and accounting standards, China has instigated significant improvements (ACGA, 2007). Despite this, China often languishes at the bottom in the ranking of global CG standards. Its monitoring and enforcement still leave much to be desired.

This study thus confirms the widely accepted CG view of separating CEO from board Chair, to avoid the negative impact on firm performance as a result of over-concentration of power and thus safeguarding the board from being dictated to by the leader. The empirical findings are in favour of a 2-tier leadership structure recommended by the HK-CG Code, to serve as a firewall to mitigate the risk of abuse of power by the CEO. A firewall does not necessarily help improve performance. Instead, it may impose extra cost on the board in terms of information and power sharing. Nonetheless, its protective effect could demonstrate its significance at times

of critical moments of abuse or external turbulence. This is particularly evident during global financial crisis.

In conclusion, the empirical results support the implementation of A.2.1 of HK-CG Codes in the separation of CEO from the board Chair and A.4.4 of HK-CG Codes in the setting up of a nomination committee. Indeed, they are of particular importance to firms at times of financial crisis. Firms tend to spend the least efforts to satisfy the statutory requirement as shown in the large number of non-compliance with respect to A.2.1 and A.4.4 of the HK-CG Code. It is thus recommended that the results of this dissertation be publicised to the investor community to reinforce the market preference of separating the titles of CEO and COB. On the other hand, these code provisions could be made into regulations, to better protect the interest of the shareholders.

## References

- Abdullah, S. H. (2004). Board composition, CEO duality and performance among Malaysian listed companies. *Corporate Governance*, 4(4), 47-61.
- ACGA, Asian Corporate Governance Association (2007), *CG Watch 2007 Corporate governance in Asia*. CLSA. Retrieved 5 March 2010, from [http://www.acga-asia.org/public/files/ACGA\\_CLSA\\_CGWatch2007\\_Extract.pdf](http://www.acga-asia.org/public/files/ACGA_CLSA_CGWatch2007_Extract.pdf)
- Ahmed, K., Hossain, M. & Adams, M. (2006). The effects of board composition and board size on the informativeness of annual accounting earnings. *Corporate Governance: An International Review*, 14(5), 418-431.
- Allen, F., Qian, J. & Qian, M. (2005). Law, finance, and economic growth in China. *Journal of Financial Economics*, 77(1), 57–116.
- Anderson, C. A. & Anthony, R. N. (1986). *The New Corporate Directors*. New York: John Wiley and Sons.
- Anderson, R. C., Mansi, S.A. & Reeb, D. M. (2004). Board Characteristics, Accounting Report Integrity, and The Cost Of Debt. *Journal of Accounting and Economics*, 37(3), 315-342.
- Bai, C., Liu, Q., Lu, J., Song, F. & Zhang, J. (2004). Corporate governance and market valuation in China. *Journal of Comparative Economics*, 32, 599–616.
- Baliga, B., Moyer R. & Rao, S. (1996). CEO duality and firm performance: What's the fuss? *Strategic Management Journal*, 17(1), 41-53.
- Bange, M. & Mazzeo, M. (2004). Board Composition, Board Effectiveness, and the Observed form of Takeover Bids. *The Review of Financial Studies*, 17, 1185-1215.
- Barboza, D. (2008, November 10). China unveils \$586 billion stimulus plan. *International Herald Tribune*. Retrieved 29 October 2011, from [http://www.nytimes.com/2008/11/10/world/asia/10iht-10china.17673270.html?\\_r=2](http://www.nytimes.com/2008/11/10/world/asia/10iht-10china.17673270.html?_r=2)
- Bebchuk, L. A. & Fried, J. M. (2003). Executive Compensation as an Agency Problem. *Journal of Economic Perspectives*, 17(1), 71–92.



Bebchuk, L. & Fried, J. (2004). *Pay without Performance: The Unfulfilled Promise of Executive Compensation*. MA: Harvard University Press.

Bebchuk, L. A., Fried, J. M., & Walker, D. I., (2002). Managerial Power and Rent Extraction in the Design of Executive Compensation. *The University of Chicago Law Review*, 69, 751–846.

Bebchuk, L. A. & Cohen, A. (2005). The costs of entrenched boards. *Journal of Financial Economics*, 78, 409-433.

Bennedsen, M., Kongsted, H. & Nielsen, K. (2007). The causal effect of board size in the performance of small and medium-sized firms. *Journal of Banking & Finance*, 32(6), 1098-1109.

Berg, S. V. & Smith, S. K. (1978). CEO and Board Chairman: A Quantitative Study of Dual vs. Unitary Board Leadership. *Directors and Boards*, (3), 34-39.

Bhagat, S & Bolton, B. (2008). Corporate governance and firm performance, *Journal of Corporate Finance*, 14, 257-273.

Biswas, P. K. & Bhuiyan, H. U. (2008). Corporate Governance and Firm Performance: Theory and Evidence from Literature. Working paper. Retrieved 5 August 2010, from <http://dx.doi.org/10.2139/ssrn.1257617>

Black, B. S., Jang, H. & Kim, W. (2006). Does corporate governance predict firms' market value? Evidence from Korea. *Journal of Law, Economics and Organization*, 22(2), 1-48.

Boyd, B. K. (1995). CEO duality and firm performance: A contingency model. *Strategic Management Journal*, 16(4), 301-312.

Bransetter, L. (2008). *China's embrace of globalization, China's Great Transformation*. Cambridge: Cambridge university press.

Brickley, J., Coles, J. & Jarrell, G. (1997). Leadership structure: Separating the CEO and Chairman of the Board. *Journal of Corporate Finance*, 3(3), 189-220.

- Brockmann, E.N., Hoffman, J.J., Dawley, D.D., & Fornaciari, C.J. (2004). The Impact of CEO Duality and Prestige on a Bankrupt Firm. *Journal of Managerial Issues*, 16(2) 178-196.
- Brown, L. D. & Caylor, M. L. (2004). Corporate Governance and Firm Performance. Working Paper. Retrieved 18 October 2010, from <http://ssrn.com/paper=586423>.
- Bruce, D. N. (2010). Corporate Governance Mechanisms & Firm Efficiency. *International Journal of Business & Management*. 6(5), 28-40.
- Campello, M., Graham, J. R. & Harvey, C. R. (2010). The real effects of financial constraints: Evidence from a financial crisis. *Journal of Financial Economics*, 97(3), 470–487.
- Carapeto, M., Lasfer, M. & Machera, K. (2005, June). *Does Duality Destroy Value?* Cass Business School City University, London, Research Paper. Retrieved from <http://69.175.2.130/~finman/Reno/Papers/Cadbury.pdf>
- Cavana, R. Y., DeLahaye, B. L. & Sekaran, U. (2001). *Applied Business Research: Qualitative and Quantitative Methods*. 1st edition, Australia: John Wiley.
- Chan, S. Y. (2001). Quality management systems certification: research note, *ABACUS*, 37(2), 248-266.
- Chau, G. & Leung, P. (2006). The impact of board composition and family ownership on audit committee formation: evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 15, 1-15.
- Chen, C. J. & Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, 19(4-5), 285-310.
- Chen, Z., Cheung, Y., Stouraitis, A. & Wong, A. (2005). Ownership concentration, firm performance, and dividend policy in Hong Kong. *Pacific-Basin Finance Journal*, 13, 431– 449.
- Cheng, S. (2008). Board size and the variability of corporate governance. *Journal of Financial Economics*, 87, 157-176.

- Cheng, S. (2010). The influence of corporate governance structure on executive pay. *Research in Business and Economics Journal*, 3, 1-17.
- Cheung, Y. L., Stouraitis, A. & Wong, A. W. S. (2005). Ownership concentration and executive compensation in closely held firms: Evidence from Hong Kong. *Journal of Empirical Finance*, 12, 511–532.
- Cheung, Y. L., Connelly, J. T. & Limpaphayom, P. (2007). Do investors really value corporate governance? Evidence from the Hong Kong market. *Journal of International Financial Management and Accounting*, 18, 86–122.
- Chiang, H. & Lin, M. (2009, June). *Board Composition and Firm Performance* (Doctoral thesis). Feng Chia University and St. John's University. Retrieved from <http://www.theibfr.com/INTERNET/CR03191012-Lin-Presentation-BoardComposition.pdf>
- CSRC, China Securities Regulatory Commission (2001). Guidelines for Introducing Independent Directors to the Board of Directors of Listed Companies. State Economic and Trade Commission, 16 August.
- CSRC, China Securities Regulatory Commission (2002). Code of Corporate Governance for Listed Companies in China. State Economic and Trade Commission. Retrieved 12 April 2010, from <http://www.csrc.gov.cn/n575458/n4001948/n4002030/4062964.html>
- Claessens, S., Djankor, J., Fan, J. & Lang, L. (2002). Disentangling the Incentive and Entrenchment Effects of Large Shareholders. *The Journal of Finance*, 57(6), 2741-2771.
- Coles, J. L. & Hesterley, W. S. (2000). Independence of the chairman and board composition: Firm choices and shareholder value. *Journal of Management*, 26, 195-214.
- Conyon, M. J. & Peck, S. I. (1998). Board Size and Corporate Performance: Evidence from European Countries. *European Journal of Finance*, 4(3), 291-304.
- Cooper, D. R. & Schindler, P. S. (2006). *Business Research Methods, 9th edition*. USA: McGraw Hill.

- Core, J. E., Holthausen, R. W. & Larcker, D. F. (1999). Corporate Governance, CEO Compensation, and Firm Performance. *Journal of Financial Economics*, 51(3), 371–406.
- Cull, R. & Xu, L. (2005). Institutions, ownership, and finance: The determinants of profit reinvestment among Chinese firms. *Journal of Financial Economics*, 77, 117–146.
- Daily, C. M. & Dalton, D. R. (1994). Bankruptcy and Corporate Governance: The Impact of Board Composition and Structure. *The Academy of Management Journal*, 37(6), 1603-1617.
- Daily, C. M. & Dalton, D. R. (1997). CEO and Board Chair Roles Held Jointly or Separately: Much Ado about Nothing? *The Academy of Management Executive*, 11(3), 11-20.
- Dalton, D. R., Daily, C. M., Ellstrand, A. E. & Johnson, J. L. (1998). Meta-Analytic Reviews of Board Composition, Leadership Structure and Financial Performance. *Strategic Management Journal*, 19(3), 269-290.
- Dalton, C. M. & Dalton, D. R. (2005). Boards of Directors: Utilizing Empirical Evidence in Developing Practical Prescriptions. *British Journal of Management*, 16, s91-s97.
- Davidson, W. N., Ning, Y., Rakowski, D. & Elsaid E. (2008). The antecedents of simultaneous appointments to CEO and Chair. *Journal of Management and Governance*, 12(4), 381-401.
- Davis J. H., Schoorman D. & Donaldson L. (1997). Toward a stewardship theory of management. *Academy of Manage Review*, 22(1), 20–47.
- De Trenck, C., Cartledge, S., Daswani, A., Katz, C. A. & Sakmar, D. (1998). *Red Chips and the Globalisation of China's Enterprises*, Second Edition. Hong Kong: Asia 2000 Limited.
- De Veaux R.D., Velleman, P.F. and Bock, D.E. (2003). *Stats: Data and Models*. 1<sup>st</sup> edition. New York, USA: Pearson Addison Wesley.

- DiMaggio, P. & Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147-160.
- Din, I. S. (2005). Politicians and banks: Political influences on government-owned banks in emerging markets. *Journal of Financial Economics*, 77(2), 453–479.
- Donaldson, L. & Davis, J. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16, 49–64.
- Dong M. Y. & Xue, Q. M. (2009). Local versus Global: Corporate Governance Practices in Chinese Domestic and Overseas Companies. *International Journal of Disclosure and Governance*, 6, 336-354.
- Dulewicz, V. and P. Herbert (2004). Does the composition and practice of boards of directors bear any relationship to the performance of their companies? *Corporate Governance: An International Review*, 12 (3), 263-280.
- Durnev, A. & Kim, E.H. (2005). To steal or not to steal: Firm attributes, legal environment, and valuation. *Journal of Finance*, 60(3), 1461-1494.
- Eisenhardt, M, K. (1989). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 57.
- Elsayed, K. (2007). Does CEO Duality Really Affect Corporate Performance? *Corporate Governance: An International Review*, 15(6), 1203-1214.
- Ezzine, H. & Olivero, B. (2011). Is Corporate Governance a Way to Withstand Crisis Propagation? *Middle Eastern Finance and Economics*, 12, 1-13.
- Faleye, O. (2007). Does one hat fit all? The case of corporate leadership structure. *Journal of Management and Governance*, 11, 239–259.
- Fama, E. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288-307.
- Fama, E. F. & French, K. (1992). The cross-section of expected stock returns. *Journal of Finance*, 47, 427-465.

- Fama, E. F. & French, K. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics*, 33, 3-56.
- Fama, E. F. & French, K. (1997). Industry costs of equity. *Journal of Financial Economics*, 43, 153-193.
- Fama, E. F. & Jensen, M. C. (1983). Agency problems and residual claims. *Journal of Law and Economics*, 26(2), 327-349.
- Fama, E. F. & Jensen, M. C. (1998). Separation of Ownership and Control. Foundations of Organizational Strategy. *Journal of Law and Economics*, 26(June), 301-325.
- Fama, E. F. & MacBeth, J. (1973). Risk, return and equilibrium: Empirical tests. *Journal of Political Economy*, 81, 607-636.
- Fayol, H. (1949). *General and industrial management*, translated from the French edition (Dunod) by Constance Storrs, Pitman.
- Finkelstein, S. & 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(5), 1079-1108.
- Fossey, E., Harvey, C., McDermott, F. & Davidson, L. (2002). Understanding and Evaluating Qualitative Research. *Australian and New Zealand Journal of Psychiatry*, 6, 717-732.
- Gabrielsson, J. & Huse, M. (2004). Context, behavior and evolution - challenges in research on boards and governance, *International Studies in Management and Organization*, 34(2) 11-36.
- Gill, A. & Allen, J. (2007). *CG Watch 2007*. Corporate Governance in Asia, Asian Corporate Governance Association.
- Green, S. (2004). Unfinished Business: Abolish The Imperial CEO. *Journal of Corporate Accounting and Finance*, 15, 19-22.
- Gompers, P., Ishii, L. & Metick, A. (2003). Corporate Governance and Equity Prices. *Quarterly Journal of Economics*, 118, 107-155.

Gul, A. F. & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, 23(5), 351-79.

Gunasekarage, A., Hess, K., & Hu, A. (2007). The Influence of the Degree of State Ownership and the Ownership Concentration on the Performance of Listed Chinese Companies. *Research in International Business and Finance* 21(3), 379-395.

Gupta, K., Krishnamurti, C. & Tourani-Rad, A. (2011). *Is Corporate Governance Relevant During the Financial Crisis? Cross-Country Evidence*. Working Paper, Retrieved 26 February 2012, from [http://papers.ssrn.com/sol3/cf\\_dev/AbsByAuth.cfm?per\\_id=510325](http://papers.ssrn.com/sol3/cf_dev/AbsByAuth.cfm?per_id=510325)

Hansen, G. & Wernerfelt, B. (1989). Determinants of firm performance: The relative importance of economic and organizational factors. *Strategic Management Journal*, 10(5), 399-411.

Higgs, D. (2003). *Review of the role and effectiveness of non-executive directors*. United Kingdom: The Department of Trade and Industry.

Hillman, A. & Dalziel, T. (2003). Boards of Directors and Firm Performance: Integrating Agency and Resource Dependence Perspectives. *Academy of Management Review*, 28(3), 383-396.

Hirshleifer, D. & Thakor, A. V. (1994). Managerial Performance, Boards Of Directors And Takeover Bidding. *Journal Of Corporate Finance* 1, 63-90.

HKEx, Hong Kong Stock Exchange (2005a). *Listing Rules (Main Board)*, Hong Kong: Hong Kong Exchanges and Clearing Ltd.

HKEx, Hong Kong Stock Exchange (2005b). *Appendix 14 Code on Corporate Governance Practices*. Hong Kong: Hong Kong Exchanges and Clearing Ltd.

HKEx, Hong Kong Stock Exchange (2005c). *HKEx Fact Book 2004*. Hong Kong Exchanges and Clearing Ltd. Retrieved 8 March 2010, from <http://www.hkex.com.hk/eng/stat/statrpt/factbook2004/fb2004.htm>

HKEx, Hong Kong Stock Exchange (2009). *HKEx Fact Book – 2009*. Retrieved 23 March 2010, from <http://www.hkex.com.hk/eng/stat/statrpt/factbook/factbook2009/Documents/01.pdf>

HKEx, Hong Kong Stock Exchange (2010a). *Analysis of Corporate Governance Practices Disclosure in 2009 Annual Reports*. Hong Kong Exchanges and Clearing Ltd. Retrieved 8 January 2011, from [http://www.HKExnews.hk/reports/corpgovpract/CG\\_Practices\\_2010\\_e.pdf](http://www.HKExnews.hk/reports/corpgovpract/CG_Practices_2010_e.pdf)

HKEx, Hong Kong Stock Exchange (2010b). *HKEx Fact Book 2010*. Hong Kong Exchanges and Clearing Ltd. Retrieved 16 March 2010, from <http://www.hkex.com.hk/eng/stat/statrpt/factbook/factbook2010/fb2010.htm>

HKEx, Hong Kong Stock Exchange (2011). Hong Kong Exchanges and Clearing Ltd. Retrieved 26 April 2011, from [http://www.HKEx.com.hk/eng/invest/company/profile\\_page\\_e.asp?WidCoID=2899&WidCoAbbName=&Month=&langcode=e](http://www.HKEx.com.hk/eng/invest/company/profile_page_e.asp?WidCoID=2899&WidCoAbbName=&Month=&langcode=e)

Ho, C. K. (2005). Corporate Governance and Corporate Competitiveness: an analysis. *Corporate Governance: An International Review*, 13(2), 211-253.

Ivashina, V. & Scharfstein, D. (2010). Bank lending during the financial crisis of 2008. *Journal of Financial Economics*, 97(3), 319–338.

Iyengar, R. & Zampelli, E. (2009). Self-selection, endogeneity, and the relationship between CEO duality and firm performance. *Strategic Management Journal*, 30, 1092–1112.

Jensen, M.C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *American Economic Review*, 76(2), 323-9.

Jensen, M. C. (1993). The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems. *Journal of Finance*, 48(3), 831-880.

Jensen, M. C. & Murphy, K. J. (1990). Performance pay and top-management incentives. *Journal of Political Economy*, 98(2), 225-264.

Jensen, M. C. & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3, 305–360.



Judge, W.Q., Naoumova, I. & Koutzevol, N. (2003). Corporate governance and firm performance in Russia: an empirical study. *Journal of World Business*, 38(4), 385-396.

Judge, W. Q. & Zeithaml, C. P. (1992). Institutional and strategic choice perspectives on board involvement in the strategic decision process. *Academy of Management Journal*, 35(4), 766-94.

Kaplan, S. N. & Zingales, L. (1997). Do Investment - Cash Flow Sensitivities Provide Useful Measures of Financing Constraints? *The Quarterly Journal of Economics*, 112(1), 169-215.

Kiel, G. C. & Nicholson, G. (2003). Board composition and corporate performance: how the Australian experience informs contrasting theories of corporate governance. *Corporate Governance: An International Review*, 11(3), 189-205.

Kim, S. (2003). Research paradigms in organizational learning, and performance: Competing models of inquiry. *Information Technology Learning, and Performance Journal*, Spring 2003, 9-18.

Krejcie, R. V. & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.

Kuppuswamy, V. & Villalonga, B. (2010). Does diversification create value in the presence of external financing constraints? Evidence from the 2008–2009 financial crisis. *Harvard Business School Finance*, Working Paper 1569546.

Kwon, I. (2008). *Separating the Roles of Chairman & CEO: A Model of Leadership and Authority*. University at Albany. Retrieved 19 June 2010, from <http://www.albany.edu/economics/research/workingp/2008/Leadership.pdf>

Kwok, J. (1998). *Does CEO duality matter? An integrative approach* (Doctoral thesis). USA: Department of Finance, Insurance and Business Law Virginia Polytechnic Institute and State University.

Lam, T. & Lee, S. (2008). CEO duality and firm performance: evidence from Hong Kong. *Journal of Corporate Governance*, 8(3), 299-316.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. & Vishny, R. (2002). Investor protection and corporate valuation. *Journal of Finance*, 57, 1147–1170.

Lee, J. & Poon, J. (2005). *Alternative Measures of the Size of the Stock Market. Research Paper No. 27*. Hong Kong: Research Department of the Supervision of Markets Division, Hong Kong Securities and Futures Commission. Retrieved 25 August 2011, from <http://www.sfc.hk/sfc/doc/EN/research/research/RS%20paper%2027.pdf>

Lehmann E. & Weigand J. (2000). Does the Governed Corporation Perform Better? Governance Structures and Corporate Performance in Germany. *European Finance Review*, 4(2), 157-195.

Lemmon, M. L. & Lins, K. V. (2003). Ownership structure, corporate governance, and firm value: Evidence from the East Asian Financial crisis. *Journal of Finance*, 58(4), 1445–1468.

Li, S. S., Shou, L. F. & Zhu, R. (2011). *IPO Guide for Chinese Red-chips*. Hong Kong: Hong Kong Mobile Financial Publication.

Lipton, M. & Lorsch, J.W. (1992). A modest proposal for improved corporate governance. *Business Lawyer*, 48, 59–77.

Liu, S. (2005). Corporate Governance and Development: The Case of China. *Managerial & Decision Economics*, 26(7), 445-449.

Liu, Q. (2006). Corporate governance in China: Current practices, economic effects and institutional determinants. *CESifo Economic Studies*, 52(2), 415–453.

Liu, C. Y., Uchida, K. & Yang, Y. F. (2012). Corporate governance and firm value during the global financial crisis: Evidence from China. *International Review of Financial Analysis*, 21, 70-80.

Lu, D., Thangavelu, S. & Hu, Q. (2005). Biased lending and non-performing loans in China's banking sector. *Journal of Development Studies*, 41(6), 1071–1091.

Lynall M.D., Golden B.R. & Hillman A.J. (2003). Board composition from adolescence to maturity: A multitheoretic view. *Academy of Management Review*, 28(3): 416-431.

Main, B. G., III, C. A. & Wade, J. (1995). The CEO, the Board of Directors and Executive Compensation: Economic and Psychological Perspectives. *Industrial and Corporate Change*, 4(2), 293–332.

- Mak, Y. & Kusnad, Y. (2005). Size really matters: Further evidence on the negative relationship between board size and firm value. *Pacific-Basin Finance Journal*, 13(3), 301-318.
- Malmendier, U. & Tate, G. (2009). Superstar CEOs. *The Quarterly Journal of Economics*, 124(4), 1593-1638.
- Mitton, T. (2002). A cross-firm analysis of the impact of corporate governance on the East Asian Financial crisis. *Journal of Financial Economics*, 64(2), 215-241.
- Monks, R. & Minow, N. (2004). *Corporate Governance*, 3rd edition. Oxford, UK: Blackwell Publishing.
- Naudé, W. (2009). The Financial Crisis of 2008 and the Developing Countries. *WIDER Discussion Paper* 2009/01. Helsinki: UNU-WIDER.
- Nowland, J. (2008). Are East Asian companies benefiting from Western board practices? *Journal of Business Ethics*, 79(1-2), 133-150.
- Open University of Hong Kong, OUHK (2005). *CG in Action Episode II Corporate Governance in HK*, 2005, B898/02, Retrieved 2nd May 2010, from Hong Kong: TVB Pearl.
- Peng, M., Zhang, S. & Li, X. (2007). CEO duality and firm performance during China's institutional transitions. *Management and Organization Review*, 3(2), 205-225.
- Petra, S. T. & Dorata, N. T. (2008). Corporate governance and chief executive officer compensation. *Corporate Governance*, 8(2), 141 – 152.
- Pfeffer, J. (1972). Size and composition of corporate boards of directors: the organisation and its environment. *Administrative Science Quarterly*, 17(2), 218-228.
- Pfeffer, J., & Salancik, G. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper and Row.
- Pi, L. & Timme, S. (1993). Corporate control and bank efficiency. *Journal of Banking and Finance*, 17, 515-530.

- Pincus, K. M., Rusbarsky, R. & Wong, J. (1989). Voluntary formation of corporate audit committees among NASDAQ firms, *Journal of Accounting and Public Policy*, 8, 239-265.
- Quer, D., Claver, E. & Rienda, L. (2011). Political risk, cultural distance, and outward foreign direct investment: Empirical evidence from large Chinese firms. *Asia Pacific Journal of Management*, January, 1-16.
- Rajan, R. G. & Zingales, L. (1998). Which capitalism? Lessons from the East Asian Crisis. *Journal of Applied Corporate Finance*, 11(3), 40–48.
- Ramamurti, R. (2000). A Multilevel Model of Privatization in Emerging economies. *Academy of Management Review*, 25(3), 525 - 550.
- Ramdani, D. & Van Witteloostuijn, A. (2009). *Board Independence, CEO Duality and Firm Performance: A Quantile Regression Analysis for Indonesia, Malaysia, South Korea and Thailand*. Working Papers, 1-36. Faculty of Applied Economics, University of Antwerp, Belgium.
- Rechner, P. L. & Dalton, D. R. (1991). CEO duality and organizational performance: A longitudinal analysis. *Strategic Management Journal*, 12(2), 155-160.
- Rhoades, D. L., Rechner, P. L. & Sundaramurthy, C. (2001). A Meta-analysis of Board Leadership Structure and Financial Performance: are two heads better than one? *Corporate Governance: An International Review*, 9(4), 311.
- Ruigrok, W., Peck, S., Tacheva, S., Greve, P. & Hu Y. (2006). The Determinants and Effects of Board Nomination Committees. *Journal of Management and Governance* 10(2), 119-148.
- Sanda, A., Mukaila A. & Garba T. (2003). Corporate Governance Mechanisms and Firm Financial Performance in Nigeria. Final Report Presented to the Biannual Research Workshop of the AERC, 24-29.
- Schmid, M., and H. Zimmermann, (2008). Leadership Structure and Corporate Governance in Switzerland. *Journal of Applied Corporate Finance*, 20(1), 109-120.
- Sekaran, U. & Bougie, R. (2009). *Research Methods for Business: A Skill Building Approach*, Wiley, Chichester, UK. 294-295.

Shivdasani, A. & Yermack, D. (1999). CEO Involvement in the Selection of New Board Members: An Empirical Analysis. *Journal of Finance*, 54, 1829–1853.

SSE, Shanghai Stock Exchange. (2011, December). *Market Cap for Stocks*. Retrieved from [http://www.sse.com.cn/sseportal/en/c05/c02/c04/c02/p1322/c1505020402\\_p1322.shtml](http://www.sse.com.cn/sseportal/en/c05/c02/c04/c02/p1322/c1505020402_p1322.shtml)

Stoeberl, P. A. & Sherony, B. C. (1985). *Board efficiency and effectiveness. Handbook for Corporate Directors*, 12.1–12.10. New York: McGraw-Hill.

Tam, O. K. (1999). *The Development of Corporate Governance in China*. Northampton, MA: Edward Elgar.

Tam, O. K. & Tan, M. G. (2007). Ownership, governance and firm performance in Malaysia. *Corporate Governance: An International Review*, 15, 208–222.

Tan, R. S. K., Chang, P. L., & Tan, T. W. 2001. CEO share ownership and firm value. Asia Pacific. *Journal of Management*, 18, 355–371.

Tian, J. & Lau, C. (2001). Board Composition, Leadership Structure and Performance in Chinese Shareholding Companies. *Asia Pacific Journal of Management*, 18, 245–263.

Tomasic, R. A. (2011). The Failure of Corporate Governance and the Limits of Law: British Banks and the Global Financial Crisis. In W. Sun, J. Stewart, D. Pollard, (Eds), *Corporate Governance and The Global Financial Crisis – International Perspectives* (pp. 50-74). Cambridge University Press.

Tsui, J. and F.A. Gul, (2000). Corporate Governance and Financial Transparencies in the Hong Kong Special Administrative Region of The People's Republic of China. *The Second Asian Roundtable on Corporate Governance*. OECD/ World Bank/ Asian Development Bank

Wallace, W. A. & Cravens, K. S. (1997). Evaluating Control Risk from a Corporate Governance Perspective. *Managerial Finance*, 23(12), 22-37.

Wardlow, G. (1989). Alternative modes of inquiry for agricultural education. *Journal of Agricultural Education*, 30(4), 2-7.

Warther V. A. (1998). Board Effectiveness and Board Dissent: A Model of the Board's Relationship to Management and Shareholders. *Journal of Corporate Finance*, 4, 53-70.

Wei, Y. (2003). Comparative Corporate Governance: A Chinese Perspective, *Global Trade And Finance Series*, 3, Kluwer Law International, Australia.

Yauch, C. A. & Steudel, H. J. (2003). Complementary use of qualitative and quantitative cultural assessment methods. *Organizational Research Methods*, 6(4), 465-470.

Yermack, D. (1996). Higher Market Valuation of Companies with a Small Board of Directors. *Journal of Financial Economics*, 40(2), 185-211.

Yu, M. (2009). CEO Duality and Firm Performance for Chinese Shareholding Companies. *19th Chinese Economic Association (UK) Annual Conference*. Retrieved 20 June 2010, from <http://ssrn.com/abstract=1360703>

Yu, M. & Yang, Y. (2010). CEO duality and firm performance - do macroeconomic factors matter? *European Academy of Management (EURAM) Conference*. Tor Vergata University, Rome, Italy.

Zahra, S.A. & Pearce, J.A. (1989). Boards of Directors and Corporate Financial Performance: A Review and Integrated Model. *Journal of Management*, 15(2), 291–334.

Zhang, H. (2008). Corporate governance and dividend policy: A comparison of Chinese firms listed in Hong Kong and in the Mainland. *China Economic Review*, 19(3), 437-459.

## ***Appendix 1***

### **Table of the Full Sample of H-shares and Red-chips**

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**Appendix 1** Table of the Full Sample of H-shares and Red-chips

No.	Stockcode	HK-listed Chinese Firm	Type of Chinese Firm
1	74	Great Wall Technology Co Ltd	H-share
2	81	China Overseas Grand Oceans Group Ltd	Red-chip
3	107	Sichuan Expressway Co Ltd	H-share
4	119	Poly (Hong Kong) Investments Ltd	Red-chip
5	123	Yuexiu Property Co Ltd	Red-chip
6	124	Kingway Brewery Holdings Ltd	Red-chip
7	135	Kunlun Energy Co Ltd	Red-chip
8	154	Beijing Development (Hong Kong) Ltd	Red-chip
9	161	CATIC Shenzhen Holdings Ltd	H-share
10	168	Tsingtao Brewery Co Ltd	H-share
11	171	Silver Grant International Industries Ltd	Red-chip
12	177	Jiangsu Expressway Co Ltd	H-share
13	187	Beiren Printing Machinery Holdings Ltd	H-share
14	270	Guangdong Investment Ltd	Red-chip
15	300	Shenji Group Kunming Machine Tool Co Ltd	H-share
16	317	Guangzhou Shipyard International Co Ltd	H-share
17	323	Maanshan Iron & Steel Co Ltd	H-share
18	338	Sinopec Shanghai Petrochemical Co Ltd	H-share
19	347	Angang Steel Co Ltd	H-share
20	350	Jingwei Textile Machinery Co Ltd	H-share
21	357	Hainan Meilan International Airport Co Ltd	H-share
22	358	Jiangxi Copper Co Ltd	H-share
23	386	China Petroleum & Chemical Corporation	H-share
24	506	China Foods Ltd	Red-chip
25	517	COSCO International Holdings Ltd	Red-chip
26	525	Guangshen Railway Co Ltd	H-share
27	548	Shenzhen Expressway Co Ltd	H-share
28	553	Nanjing Panda Electronics Co Ltd	H-share
29	560	Chu Kong Shipping Development Co Ltd	Red-chip
30	576	Zhejiang Expressway Co Ltd	H-share
31	588	Beijing North Star Co Ltd	H-share
32	598	Sinotrans Ltd	H-share
33	604	Shenzhen Investment Ltd	Red-chip
34	629	Yue Da Mining Holdings Ltd	Red-chip
35	688	China Overseas Land & Investment Ltd	Red-chip
36	694	Beijing Capital International Airport Co Ltd	H-share
37	696	TravelSky Technology Ltd	H-share
38	719	Shandong Xinhua Pharmaceutical Co Ltd	H-share
39	728	China Telecom Corporation Ltd	H-share
40	836	China Resources Power Holdings Co Ltd	Red-chip



No.	Stockcode	HK-listed Chinese Firm	Type of Chinese Firm
41	857	PetroChina Co Ltd	H-share
42	874	Guangzhou Pharmaceutical Co Ltd	H-share
43	882	Tianjin Development Holdings Ltd	Red-chip
44	883	CNOOC Ltd	Red-chip
45	902	Huaneng Power International Inc	H-share
46	908	Jiuzhou Development Co Ltd	Red-chip
47	914	Anhui Conch Cement Co Ltd	H-share
48	934	Sinopec Kantons Holdings Ltd	Red-chip
49	980	Lianhua Supermarket Holdings Co Ltd	H-share
50	991	Datang International Power Generation Co Ltd	H-share
51	995	Anhui Expressway Co Ltd	H-share
52	1033	Sinopec Yizheng Chemical Fibre Co Ltd	H-share
53	1045	APT Satellite Holdings Ltd	Red-chip
54	1052	GZI Transport Ltd (Yuexiu Transport Infrastructure Ltd)	Red-chip
55	1053	Chongqing Iron & Steel Co Ltd	H-share
56	1055	China Southern Airlines Co Ltd	H-share
57	1065	Tianjin Capital Environmental Protection Group Co Ltd	H-share
58	1070	TCL Multimedia Technology Holdings Ltd	Red-chip
59	1071	Huadian Power International Corporation Ltd	H-share
60	1093	China Pharmaceutical Group Ltd	Red-chip
61	1114	Brilliance China Automotive Holdings Ltd	Red-chip
62	1122	Qingling Motors Co Ltd	H-share
63	1133	Harbin Power Equipment Co Ltd	H-share
64	1138	China Shipping Development Co Ltd	H-share
65	1171	Yanzhou Coal Mining Co Ltd	H-share
66	1202	Chengdu PUTIAN Telecommunications Cable Co Ltd	H-share
67	1203	Guangnan (Holdings) Ltd	Red-chip
68	1205	CITIC Resources Holdings Ltd	Red-chip
69	1208	Minmetals Resources Ltd	Red-chip
70	1211	BYD Co Ltd	H-share
71	2302	CNNC International Ltd	Red-chip
72	2333	Great Wall Motor Co Ltd	H-share
73	2355	Baoye Group Co Ltd	H-share
74	2357	AviChina Industry & Technology Co Ltd	H-share
75	2600	Aluminum Corporation of China Ltd	H-share
76	2868	Beijing Capital Land Ltd	H-share
77	2883	China Oilfield Services Ltd	H-share

## ***Appendix 2***

### **Summary of Methodology Amongst Key Studies of CEO Duality (Ramdani and Witteloostuun, 2009, p.29)**

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**Appendix 2** Summary of Methodology Amongst Key Studies of CEO Duality (Ramdani and Witteloostuun, 2009, p.29)

Author(s)	Independent Variable	Dependent Variable	Data	Results	Methods
Chaganti <i>et al.</i> (1985)	CEO Duality	Firm failure	21 pairs of retailing firms in the US	Not significant	ANOVA
Kesner <i>et al.</i> (1986)	CEO Duality	Illegal activities	384 firms of <i>Fortune 500</i>	Not significant	ANOVA
Rechner and Dalton (1991)	CEO Duality	Return on Investment	141 companies of <i>Fortune 500</i>	Duality significantly lower	ANOVA and MANOVA
		Return on Equity		Duality significantly lower	
		Profit Margin		Duality significantly lower	
Donaldson and Davis (1991)	CEO Duality	Return on Equity	337 US corporations	Duality significantly higher	ANOVA
Daily and Dalton (1992)	CEO Duality	Return on Assets	100 US firms listed in <i>Inc.</i> Magazine	Not significant	ANOVA and MANOVA
		Return on Equity		Not significant	
		Price Earning Ratio		Not significant	
Pi and Timme (1993)	CEO Duality	Cost efficiency	112 publicly traded US commercial banks	Significantly negative	OLS regression
		Return on Assets		Not significant	
Daily and Dalton (1993)	CEO Duality	ROA	186 small listed corporations in the US	Not significant	MANOVA
		ROE		Not significant	
		PER		Not significant	
Baliga <i>et al.</i> (1996)	CEO Non-Duality	Market value of the firm	172 firms of <i>Fortune 500</i>	Not significant	OLS regression
Kiel and Nicholson (2003)	CEO Duality	Tobin's Q	348 Australian listed corporations	Significantly negative	Linear regression
		ROA		Not significant	
Cheung <i>et al.</i> (2006)	CEO Duality	Market-Adjusted CAR	Listed firms in Hong Kong	Not significant	OLS regression
Al Farooque <i>et al.</i> (2007)	CEO Duality	Market to Book Value	723 firms in Bangladesh	Not significant	OLS and 2SLS regression
		Equity			Least Absolute Value regression
Elsayed (2007)	CEO Duality	Return on Assets		Not significant	
		Tobin's Q		Not significant	
Cornett (2008)	Lagged CEO Duality	Adjusted EBIT/Assets	100 firms of S&P Index	Significantly positive	Panel data regression