Independent Directors and Firm Financial Performance of H-share Companies in Hong Kong

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Statement of Originality

This work contains no materials which have been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no materials previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my dissertation, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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# Table of Contents

Statement of Originality ........................................................................................................ ii
Acknowledgments .................................................................................................................. iii
List of Tables ........................................................................................................................ vi
List of Figures ....................................................................................................................... vii
ABSTRACT ........................................................................................................................... viii

Chapter One – Introduction .................................................................................................. 1
  1.1 Background to the Research ....................................................................................... 1
  1.2 Research Gaps and Research Focus .......................................................................... 8
      1.2.1 Research Gaps .................................................................................................. 8
      1.2.2 Research Focus ............................................................................................... 10
  1.3 Justification for the Research ..................................................................................... 11
  1.4 Research Questions and Hypotheses ......................................................................... 13
  1.5 Research Method ......................................................................................................... 14
  1.6 Limitations of the Study .............................................................................................. 15
  1.7 Contributions .............................................................................................................. 16
  1.8 Dissertation Overview ................................................................................................. 17

Chapter Two – Review of the Literature .......................................................................... 19
  2.1 History and Development of Corporate Governance .............................................. 19
      2.1.1 Codes of Governance ...................................................................................... 22
      2.1.2 Boards of Directors ......................................................................................... 24
  2.2 Governance Theories ................................................................................................. 25
      2.2.1 Agency Theory ................................................................................................. 26
      2.2.2 Stewardship Theory ......................................................................................... 28
      2.2.3 Resource Dependence Theory ......................................................................... 30
  2.3 The significance of H-share companies in the Hong Kong stock market ................ 30
  2.4 H-share Companies in Hong Kong ............................................................................ 31
  2.5 The Corporate Governance Code for Hong Kong Listed Companies ..................... 34
  2.6 Board Composition ..................................................................................................... 35
      2.6.1 Independent Directors ...................................................................................... 36
      2.6.2 CEO Duality ....................................................................................................... 38
      2.6.3 Director Age ...................................................................................................... 40
      2.6.4 Board Size ........................................................................................................ 41
      2.6.5 Gender Diversity ............................................................................................... 42
  2.7 Key problems and research questions on H-share Companies .................................... 43

Chapter Three – Methodology ......................................................................................... 49
  3.1 Research Methodology ............................................................................................... 49
  3.2 Research Process and Research Design ...................................................................... 53
      3.2.1 Identifying the problem and defining the research questions ......................... 53
      3.2.2 Formulating hypotheses for testing ................................................................. 54
      3.2.3 Determining the measures and data collection ............................................... 55
      3.2.5 Research design ............................................................................................... 56
List of Tables
Table 2.1 Summary of the definitions of board independence ........................................23
  (Hong Kong, UK, US, and OECD)
Table 2.2 Comparison of Agency and Stewardship theory........................................29
Table 3.1 Summary of the variables used.................................................................75
Table 4.1 Descriptive statistics of performances and board composition variables
  by year (2008 - 2010).........................................................................................80
Table 4.2 Descriptive statistics of performances and board composition variables for
  327 firm-year observations..................................................................................83
Table 4.3 Correlation matrix among the performances and the board
  composition variables.........................................................................................86
Table 4.4 Pearson correlation test statistic between performances and
  board composition variables............................................................................87
Table 4.5 Results of the hypotheses testing.........................................................91
Table 4.6 Ordinary least square regressions for dependent variables of
  Tobin’s Q, price-to-book ratio and return-on-equity........................................93
List of Figures

Figure 2.1 Summary of the link between the research problem, the research questions and the corresponding hypotheses.................................................................46
Figure 3.1 Conceptual model.................................................................................61
Figure 4.1 Scatterplot for regression model of Return on Equity.......................95
Figure 4.2 Scatterplot for regression model of natural Log of Tobin’s Q...........95
Figure 4.3 Scatterplot for regression model of natural Log of Price-to-book ratio...96
Figure 4.4 The normal P-P Plot of regression standardized residual on Return on equity........................................................................................................97
Figure 4.5 The normal P-P Plot of regression standardized residual on natural log of Tobin’s Q.................................................................................................97
Figure 4.6 The normal P-P Plot of regression standardized residual on natural log of Tobin’s Q.................................................................................................98
Figure 4.7 Summary of the findings on significant correlations between board composition and financial performance.........................................................100
ABSTRACT

The aim of this research is to examine the relationship between board independence and firm financial performance found in the sample of 109 H-share companies in Hong Kong from 2008 to 2010. The objective of this study is to gain a better understanding on whether there is a relationship between board independence and firm performance measured by return on equity, Tobin’s Q and price-to-book ratio. This is undertaken by considering the impact on performance of: percentage of independent directors, leadership structure in terms of CEO duality, and board composition in terms of board age, board size and gender diversity. The results show that the H-share company’s market value is positively and significantly associated with the percentage of independent directors. The results support the proposition that the age of directors is positively and significantly related to both company profitability and market value. This implies that companies with a higher percentage of independent directors and higher director ages are associated with higher market values. Board size is shown to be positively and significantly correlated to profitability, but is negatively and significantly associated with market value. This implies that companies with higher director ages and larger board size are associated with higher profitability. This result indicates that investors should be concerned with the number of independent directors and board size of H-share companies in Hong Kong. As one of the mechanisms of corporate governance, the independent director system does not completely improve corporate governance and the interests of minority shareholders in H-share companies. However, investors equate the increase in the number of independent directors with market value. To protect all shareholder interests, the regulators of Hong Kong need to seek a governance system that addresses the deficiencies of the independent director system. This research highlights the policy issue of which board attributes concern most investors in the case of H-share companies.

Keywords: corporate governance, independent directors, financial performance
Chapter One – Introduction

1.1 Background to the Research

Fifty years ago, almost all management power in any corporation was wielded by senior managers, while shareholders were powerless and the directors of a board acted as tokens, recognised as rubber stamps in decision-making. Today, corporate power has ebbed away from senior managers toward the shareholders and the board of the directors (Crawford, 2007), particularly after the Enron scandal and the Sarbanes-Oxley Act (2002).

Corporate governance issue is the agency problem arising from the separation of ownership by the investors, and control by the management, in publicly listed corporations. It is the conflict of interests between the management, as the agent, and its’ shareholders as the principals. The agency problem is exacerbated when ownership becomes widely dispersed. To deal with the separation of ownership and control, corporate governance codes were called for in the late 1980s. From the introduction of the term “corporate governance” by Bob Tricker in 1984 (Tricker, 2012) to today, the definitions of corporate governance have varied. An often-quoted definition that came from Sir Adrian Cadbury in 1992 (Cadbury, 1992) is as simple as, “the system by which business corporations are directed and controlled”. The Organisation for Economic Co-operation and Development (OECD) defines corporate governance as, “a set of relationships among management, company board, its shareholders and other stakeholders” (OECD, 2004). Cornelius (2005) proposes that “corporate governance can be defined as the stewardship responsibility of corporate directors to provide oversight for the goal and strategies of a corporation and foster their implementation”. Fahy, Roche and Weiner (2005) state that “corporate governance is the systems and processes put in place to direct and control a corporation in order to increase performance and achieve sustainable shareholder value”. As Justin Owen (2003), the Royal Commissioner into the collapse of HIH Insurance, felt such definitions were simplistic and narrowly defined. He observed that corporate governance is not just a matter of having the
right policies and procedures in place. It is all about accountability and stewardship, and is a framework of rules, relationships, systems and processes within and by which management is exercised and controlled (Owen, 2003). It has to be embedded into the culture of the corporation from the very top down. Justin’s view on corporate governance is to create an environment that is conducive to success. Most of them listed above imply that governance should protect the interests of shareholders and should result in better firm performance so as to make it easier and cheaper for firms to access external funds and investors.

Despite the extensive changes made to corporate governance after the Enron scandal, many academics, regulators and shareholder activists want to see more changes and governance reforms that are comprehensively designed to effectively protect the shareholder interests, in particular when ownership takes the form of a disbursed shareholding in publicly listed corporations.

Agency theory posits a separation of interests between managers and owners (Jensen & Meckling, 1976). Effective corporate governance is required when there is a separation of ownership and control. However, corporate governance structures vary from country to country in different social, cultural, legal and economic environments. As a result, each country has developed its own corporate governance system that best serves its business operations (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). As globalization of business speeds up, it will become increasingly difficult to have one governance system for all countries, or even inside each country, when cross-listing becomes more popular in the future.

The problems with separation of ownership from control has been highly recognised as the major factor for business failure and managers expropriation of shareholder funds (Jensen, 1993). Some of these failures are from accounting scandals or business frauds such as Ahold and Parmalat in Europe, OneTel in Australia, Enron Corporation and WorldCom (now MCI) in the United States, Barings in the UK, Daiwa Bank and Sumitomo in Japan, Peregrine Investment and Carrian Investments in Hong Kong, as well as Euro-Asia
Agriculture in China. Most of these collapses were related to the performance of corporate boards. This shows that corporate governance is not only a problem for emerging market economies, but also for developed countries (Rhoads, 2004). Despite governance codes being frequently renewed, problems persist in the 21st century.

Corporate governance and firm performance has been the focus of research by academics, consultants, fund managers and rating agencies. Research across different countries shows different results and mixed conclusions. Different ownership characteristics of firms across the world have led to the creation of different governance structures (Claessens & Fan, 2002); there is no governance structure that has universal applicability or the function of “one-size-fit-all”.

Agency theorists (Eisenberg, Sundgren, & Wells, 1998; Erhardt, Werbel, & Shrader, 2003; Fama & Jensen, 1983; Jensen & Meckling, 1976) assert that internal control plays an important role in aligning the interests of shareholders and managers. Internal governance mechanisms are vital for the protection of shareholder interests. An effectively structured board is more likely to pursue shareholders’ wealth (Cannella, Daily, & Dalton, 2003; Dennis, 2001).

Good corporate governance is not just complying with the rules set up by regulators, but is about the board’s performance contributing to company direction and value to shareholders. A corporate board can be given thirty minutes to make a decision that leads to dramatic harm or great success for the corporation, particularly under the circumstances of crisis management. If boards fail badly, companies fail. The performance shortfalls and strategic missteps at companies like Hewlett-Packard, Merck and Morgan Stanley can be traced back to a dysfunction at boardroom.

For decades, the appointment of outside directors was informal (Cohan, Frazzini, & Malloy, 2012). Chief Executive Officers (CEOs) often took the lead by nominating their friends and professional acquaintances to make a so-called “balanced” board which includes the CEO, bankers, lawyers, academics and retired politicians. The job is not difficult, the pay is good
and performance is not an issue. Times have changed: today the board of directors, not only the CEO, controls the nominating process. Many boards are arguably too large, too male or too middle-aged; they lack the requisite diversity to tackle challenges in midst of fast changing business environment.

Regarding the theories on corporate governance, Hermalin and Weisbach (1991) find that there has been little theorising about boards of directors. No single theory can fully explain corporate governance mechanisms. Bonn and Pettigrew (2009) use multiple theories to explain board roles and find that this changes over the life cycle of the company. An overview provided by Brown, Beekes and Verhoeven (2011) state that a multidisciplinary approach to developing better theory is required to explain whether various corporate governance practices substitute for each other or are complements.

Agency theory has been well recognised as the major theory for the prediction of firm performance in corporate governance. It posits the relationship that can result in a transaction where the shareholder delegates management power to the manager and the wealth of the shareholder is affected by the decision-making of that manager (Arrow, 1985). Such a relationship gives rise to the agency problem whereby interests of the shareholder and interest of the manager may not necessarily being the same. The shareholder cannot perfectly and cost-freely monitor and control management. It cannot be costless to overcome the problem of asymmetric information. Agency theory specifies mechanisms in corporate governance which reduce this agency problem and then the loss associated with it (Eisenhardt, 1989). Agency theorists assert that the board of directors should provide effective monitoring and controlling of managers in order to protect shareholder interests. The conventional justification for the use of director independence is based on agency economics. However, boards have a number of roles. Agency theory mostly explains the role of monitoring and controlling of managers and also takes into considerations of directors’ resources, services and strategic roles. In addition, agency theory assumes people are self-interested not altruistic, and that those directors will act in their own interests instead of the best interests of their shareholders.
Despite agency theory’s well recognized influences on corporate governance, research findings on agency theory fail to find consistency in the assertion that more controls on managers produce better firm performance. This calls into question the assumption of the agency view that managers are opportunistic and self-interest motives. The conflict of interests by separation of ownership and control becomes the most controversial issue of corporate governance. Instead of assuming that people cannot be trusted, stewardship theory advocates the opposite view in which directors and managers are trusted to be stewards of the assets they control. Donaldson, Davis and Schoorman (1997) argue that shareholder interests are maximized by a shared incumbency of these roles. Under this theory, board members contribute to the stewardship of the corporation. Managers are far from being opportunistic followers, and act as good stewards working diligently to pursue maximum firm performance. They can perceive their interests as being aligned with that of their corporation through an expectation of future employment (Barney, 1990). If the manager’s motivations fit the model underlying stewardship theory, empowering governance structures are more appropriate.

The resource dependence role of directors is theoretically different from their agency role (Johnson, Daily, & Ellstrand, 1996). Stiles and Taylor (2002) explain resource dependence theory as another dimension of corporate governance from which to view an organization’s transactions with the environment in an open system. As resource dependence theorists posited that it is a theory of how organizations seek to manage their environments. Resource dependence theory has implications regarding the recruitment of board members and employees, production strategies, contract structure and external organizational links. The role of the board members is recognized as a source of scarce resources including human relationships and the capability to access external resources for a company (Johnson, Daily, & Ellstrand, 1996; Pearce & Zahra, 1989). Pfeffer (1972) documents that company board size and composition are rational organizational responses to the conditions of the external environment. Increasing the size and diversity of boards serves to link effectively the firm with external resources that help to overcome uncertainty and effective coping with uncertainty is essential for company survival (Pfeffer & Salancik, 1978). Board members benefit the companies depending upon their access to valued resources and
Companies incorporated in mainland China can be listed on the Hong Kong Stock Exchange (HKEx). The shares they issue and trade in Hong Kong are regarded as H-shares which are available to both Hong Kong residents and foreign investors, and are traded in Hong Kong dollars. Most H-share companies are former China state-owned enterprises (SOEs) that are in the process of privatization (Martin & Harris, 2012; Zhang, 2008). These companies operate their businesses, generate most of their profit and have their headquarters in mainland China.

At the end of 2010, Hong Kong Stock Exchange reported that there were 144 H-share companies constituting a year-end market capitalization of HK$5210.3 billion (Note: market capitalization represents the value of the H shares only, not that of the entire issued capital of the enterprise) and 24.72% of the total market capitalization (HKEx, 2010). Compared with the market capitalization of HK$4686.4 billion as at the end of 2009 (HKEx, 2009), this reflects 11.18% increase. H-share companies have become more and more important to the Hong Kong equity market since the first listing in 1992.

As a Special Administrative Region of China and a former British territory, Hong Kong operates under a constitution of Basic Law. Directors on boards have similar responsibilities to directors in the UK. Effective from 1 January 2005, the Hong Kong Stock Exchange published the New Hong Kong Code of Corporate Governance (HKEx, 2004) as the main board listing rules and requirements to replace the former Code of Best Practice. Similar to many its counterpart, like the UK, the Code operates on a comply-or-explain basis, based on the Recommended Best Practices. Board structures employ a one-board system, and all directors of corporate boards are elected by a general meeting of shareholders; the board then appoints a chairman and a chief executive officer (CEO) of the company. The Code recommends that the roles of the chairman and the CEO should be separated. Their names, relationship and the separation of their roles should be disclosed in
the corporate governance report. Effective from 30 September 2004, every Hong Kong Main Board-listed company is required to have a minimum of three independent directors (INEDs) or one-third INEDs on a board (HKEx, 2004). The company must disclose the composition of the board, by category of directors, including the names of the chairman, executive and non-executive directors (NED) as well as INEDs in the corporate governance report. The difference between NED and INED turns upon whether the NED holds more than 1% of the issued share capital of this company (HKEx, 2004).

Much of the blame for Enron and other corporate scandals are said by many to be related to corporate directors (Lieberman, 2002). In July 2002, the United States passed the Sarbanes-Oxley Act (SOX); President George W. Bush signed it and praised it as being the most far reaching reform of business practices since the time of Franklin Delano Roosevelt (Bush, 2002). SOX mandates enhanced director independence from management, as well as changes in stock exchange listing standards. Yet, arguably the meltdown of Lehman Brothers in 2008 was due to failures of diligence, ethics and controls of directors and senior management (Larcker & Tayan, 2010). The central problem addressed by corporate governance mechanisms is due to the separation of ownership and control proposed by Berle and Means (1932). Independent directors are custodians of shareholder wealth whose presence on the board reduces agency problems and improve company performance.

The H-share companies, with their thousands of shareholders, managers, creditors and state governments who own majority shares in their company, each with different interests and asymmetrical information, create a very high transaction cost environment. An effective board is recognised as a low cost monitoring and control mechanism in corporate governance. Will the board of directors use its control of the corporation to further the selfish interest of the board members and social responsibility of the state government rather than pursue the shareholders wealth maximization, particularly when growing separation of ownership and control in the modern corporation is an intensely researched topic?
1.2 Research Gaps and Research Focus

1.2.1 Research Gaps

Poor corporate governance is the major factor in almost all known corporate scandals and failures. Among various corporate mechanisms, the board of directors arguably serves the most important role, particularly in monitoring and control in corporate governance. The presence of independent directors and the separation of CEO and board chairman has become one of the major issues for to date, inconclusive international debate after several corporate scandals and the Sarbanes-Oxley Act. But, board independence is generally regarded as good governance. Indeed, in response to corporate scandals, the New York Stock Exchange (NYSE, 2003) proposed the requirements that the majority of a NYSE-listed company’s directors be independent. However, while most of the studies have been done in advanced economies, the empirical results on the relationship of director independence and board composition to firm performance are mixed and inconclusive. The definition of an independent director is different from country to country. The concept of independent director is difficult to define. Difficulties arise in attempting to determine who is a truly independent director. Companies, particularly publicly listed companies, have to deliver perceived value for money to shareholders. Good governance mechanisms aim to increase shareholders’ value and meet the expectations of all stakeholders.

Given the ownership structure of H-share companies, the nature of their business environment (a socialist economy) and their characteristics of cross-listing, H-share companies need to transform their governance practices within China to adopt a new governance structure of Hong Kong. There exist major controllers in H-share companies where a dominant shareholder (state government) who owns more than 50% of the outstanding voting shares. H-share companies exhibit a partial separation of ownership and control because minority shareholders act as one of the owners of the company, but not as one of its controllers. Such ownership structure affects the efficiency of corporate governance and thus the value of the firm, leading to a different corporate performance (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002; Stoughton & Zechner, 1998). These characteristics make it worthwhile to explore the relationship between board composition
and firm financial performance, particularly the independent director system in H-share companies.

In addition, previous studies have paid little attention to the role of the publicly listed company board in terms of its age and effect on firm performance. Earlier studies (Agrawal & Knoeber, 1996; Bhagat & Black, 2002; Campbell & Minguez-Vera, 2008; Dahya & McConnell, 2007; Yermack, 1996) have been done in advanced economies, and the effect on this research on the firm performance of Chinese firms listed outside of China is still uncertain. In response to this issue, this study attempts to contribute to the research literature by examining the effect of director age on firm performance.

As noted, a company’s board of directors has been confirmed as an important internal corporate governance mechanism for aligning the interests of managers and all the shareholders of a company. Yet, there is no consensus about a good board structure, not just in the developed countries; it is notably unanswered for the situation of H-share companies. Much of them focus on developed countries and, in particular, board composition. The effect of board independence on firm performance is still a puzzle to investors, governance academics and regulators. Previous research consistently has failed to find that more board independence produces better performance and the relationship between board composition and firm performance is still inconclusive (Bhagat & Black, 2002; Brown et al., 2011; Daily & Dalton, 1997; Johnson et al., 1996; Dalton & Dalton, 2005; Hermalin & Weisbach) and most of this literature focuses on developed country (Shivdasani & Perry, 2005). The inconclusive empirical findings need to be further researched and this calls into question the prediction of agency theory that more controls on managers produce superior firm financial performance. To fill this theoretical and research gap, a multi-theoretical framework is adopted for the prediction and explanation of the hypotheses. The research problem addressed in the study is then:

“Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?”

9
1.2.2 Research Focus

Developing countries such as China are struggling to attract foreign investment, both in resources and funds, in order to achieve economic growth. International investors are becoming choosier about where to put their money, notably after the corporate collapses in the 2000s and the recent global financial crisis. It is recognized that sound governance mechanisms are required for aligning the interests of shareholders and managers to a company. Oman, Fries and Buiter (2004) mention that different forms of ownership structures are related to different types of agency problems. An agency problem occurs mainly between shareholders and managers when the ownership structure is widely diffused, such as in the UK and the US. Given the unique ownership structure of H-share companies in Hong Kong, agency problems may occur not only between shareholders and managers, but also between the controlling shareholder (state government) and minority shareholders.

After various corporate scandals being uncovered, such as Enron and Lehman Brothers, many companies tended to shift their governance focus onto the structure of the boards of directors. Board structure arguably is important for corporate success and corporate value. The board of directors is recognized as an important mechanism in corporate governance, particularly the strengthening of board independence. Barnes (2009) finds that the use of independent board members is a governance mechanism supported by most international stock exchanges. Whereas, directors have knowledge and experience of business, it is not clear whether they are superior to others. This research focuses on the study of the effect of board independence on the firm performance of H-share companies, and to ascertain whether a possible relationship between the percentage of independent directors, CEO duality, director age, board size and gender diversity to firm performance.

Although a great number of empirical studies have been undertaken on the issue of the board of directors, Hermalin and Weisbach (2003) document that only little has been
theorised about it. No single theory can fully explain corporate governance, particularly for boards of directors. Given the nature of the ownership structure and cross-listing of H-share companies, different and often competing theoretical perspectives of agency theory, stewardship theory and resource dependence theory will be used in this study to provide insights into the impact of the structure and composition of boards of directors.

1.3 Justification for the Research

From the Enron scandal and the Sarbanes-Oxley Act (SOX, 2002) to the collapse of MF Global in the U.S., and to a series of bailouts in the European banking sector in 2011, the world economy is facing unprecedented challenges brought by the still unfolding global financial crisis. China’s economic performance and corporate governance practices are being closely watched across the world, particularly by investors and regulators.

Sino-Forest Corporation, a Canada-listed Chinese forestry company, faced its share price falling almost 80% after Muddy Waters claimed that the company lacked the legal rights to own the land it claimed to own in 2011 (Flanner, 2011). A number of institutional investors criticized Sino-Forest for not following globally recognised corporate governance practices. Investors have questioned the dual roles of Chairman and CEO, and only one-third of the directors were independent. In December 2011, Canadian regulators found the company missed a US$10 million interest payment for defaulting on US$1.8 billion worth of debt (Flanner, 2011). Such fraud by other Chinese publicly listed companies also happens in Singapore, the U.K. and the U.S. Questions have been raised about the strength of governance within many Chinese listed companies, particularly the board of directors. Corporate governance practices in Chinese listed companies continue to face scrutiny from international investors and regulators.

Since the late 1970s China has transformed from a closed, centrally planned economic system to a more market-oriented one that China’s leader call their economic system “market socialism”. It has also been called “state capitalism” (Perkins, 1988). Whatever it
has been called, China has grown nearly 10% every year for the past 30 years. In 2010, China became the world’s largest exporter (CIA, 2013). This economic reform has brought a great number of large state-owned enterprises successfully restructuring into incorporated companies, and most of these corporations have gone public by listing either inside China on the stock exchanges in Shanghai and Shenzhen or internationally on the stock exchanges of Hong Kong, London, New York and Singapore. The Chinese economic reform has led people to assume that the country’s economic system has been transformed into a capitalist economy dominated by private and publicly listed companies. However, corporatization in China is different to the privatization of state-owned corporations in Western countries like the U.K. and the U.S. The major ownership of the incorporated companies is still with the state government. An example is Sinopec Corporation, as at 31 December, 2007, the Sinopec Group Company held 75.84% of state-owned, non-tradable shares in Sinopec Corporation, with only 19.26% of H-shares being cross-listed on Hong Kong Stock Exchange (Sinopec, 2007). There remains a major problem with the implementation of a board system and direct intervention by the state government that still retains direct control over the company’s operations and management. The agency problems and agency costs created exist not only between shareholders and managers, but also between shareholders and state government.

In Hong Kong, most of the large companies are family-owned. As reported by Claessens, Djankov and Lang (2000), Hong Kong ranks fourth in terms of concentration of control, and the largest ten families own 32.1% of the total value of listed corporate assets. Surprisingly, the largest separation of ownership and control occurs in relatively small firms. There is a major challenge for the regulators of Hong Kong to implement effective corporate governance practices when taking the importance of concentrated ownership and the balance of the interests of controlling and minority shareholders into serious consideration. Undoubtedly, effective governance practices are not only required for family-owned companies in Hong Kong, but are also suitable for governing H-share companies. The topic is clouded in controversy and the problem is still unresolved.
1.4 Research Questions and Hypotheses

As the previous sections imply, the objective of the study is to examine the possible relationship between the measure of board independence and firm performance for Chinese companies listed on the Hong Kong Stock Exchange (HKEx). To accomplish the research objective, this study seeks to answer the research problem “Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?”

In line with the research problem, the research is framed in terms of five research questions, and corresponding hypotheses are set up and tested for their relationships with firm performance.

Research question 1: “Does the percentage of independent directors affect firm performance?”
Hypothesis H1: The percentage of independent directors correlates positively to return on equity. (ROE)
Hypothesis H1-1: The percentage of independent directors correlates positively to Tobin’s Q.

Research question 2: “Should the CEO also be chairman of the board?” (CEO duality)
Hypothesis H2: CEO duality correlates negatively to return on equity.
Hypothesis H2-1: CEO duality correlates negatively to Tobin’s Q.

Research question 3: “Does board age have an impact on firm performance?” (Board age)
Hypothesis H3: Average director age of a board correlates negatively to return on equity.
Hypothesis H3-1: Average director age of a board correlates negatively to Tobin’s Q.
Hypothesis H3-2: Average director age of a board correlates positively to return on equity.
Hypothesis H3-3: Average director age of a board correlates positively to Tobin’s Q.
Research question 4: “Does board size affect firm performance?”
Hypothesis H4: Board size correlates negatively to return on equity.
Hypothesis H4-1: Board size correlates negatively to Tobin’s Q.
Hypothesis H4-2: Board size correlates positively to return on equity.
Hypothesis H4-3: Board size correlates positively to Tobin’s Q.

Research question 5: “Does gender diversity affect firm performance?”
Hypothesis H5: Gender diversity correlates negatively to return on equity.
Hypothesis H5-1: Gender diversity correlates negatively to Tobin’s Q.

1.5 Research Method

To address the research problem, an organised, systematic and logical process of research using secondary data will be used to answer the questions and solve the research problem. This research follows and extends the previous methodology (Agrawal & Knoeber, 1996; Baysinger & Butler, 1985; Bhagat & Black, 1999, 2002; Chen, Lin, & Yi, 2008; Choi, Park, & Yoo, 2007), mostly adopted in other countries, on the relationship between director independence and firm performance.

This research adopts the quantitative approach of studying board independence and firm performance. It is based on the aggregated and published data of 109 H-share companies in the years 2008 to 2010 from HKEx, Bloomberg and OneSource. The research needs no access to the directors or the boards. It is a statistically rigorous insight into board independence and firm performance, direct and free from personal judgment and bias.

As at the end of 2010, HKEx reported that there were 144 H-share companies constituting a year-end market capitalization of HK$5210.3 billion (HKEx, 2010). Twenty-four of them are listed after 2008, four of them transferred from Growth Enterprise Market (GEM) to the Main board after 2009 and one company was under the delisting procedures of HKEx during the period of 2008 to 2010 (HKEx, 2008, 2009, 2010); six companies have
incomplete information disclosure and cross-sectional data are omitted in their annual reports and corporate governance reports. This study, excluding these 35 H-share companies, examines all the other H-share companies listed on the HKEx during the period of 2008 to 2010. Therefore, the sample structure is 109 H-share companies constituting a year-end market capitalization of HK$4.029.1 billion at the end of 2010 (Appendix I). This sample is approximately 80% by number of the market capitalization (HK$5210.3 billion) of H-share companies at the end of 2010. As noted the sample structure is 109 H-share companies in three years, cross-sectional dimension is much larger than time dimension; it is adequate to use pooled cross section as the data structure in this study.

Pooled regression is carried out on cross-sectional data from 2008 to 2010. The pooling data of 327 firm-year observations (109 x 3 = 327) are used for correlation and regression analysis by Ordinary Least Squares estimations (OLS). This approach is used because the data from different years are almost homogenous, as they come from the same company in different years. To measure the differences of each year, year dummy variables for years 2009 and 2010 are used to control those differences. Statistical Product and Service Solutions (SPSS) will be used as the software for statistical analysis to find out the correlations between the research variables as well as the regression models for the variables.

1.6 Limitations of the Study

This study is based on the assumption that there may be an effect on the results because of the characteristics of state-owned enterprises. In fact, there is still a minority of non-state-owned companies in the sample which allows us to further investigate whether the ownership structure, state-owned and non-state-owned, significantly influences firm performance, or moderates the relationship of director independence and board composition to firm performance. For future study, ownership structure could act as either an independent variable or a moderator on company performance. The interrelationship
between ownership structure, corporate governance, and corporate performance requires further investigations, particularly in the case of H-share companies.

Because of the sample size (327 firm-year observations), this study does not take the effect of industrial differences into consideration on examining the relationship between board attributes and firm financial performance. For future study, we suggest the inclusion of industrial fixed effects in the correlation and regression analysis when the population size is adequately large for considering industrial effect.

This research does not take into consideration of price effect on H-share companies relative to A-shares. Wang and Jiang (2004) document that price discount of H-share relative to A-shares during the time between 1994 and 2000 were influenced by ownership restrictions and market liquidity. Does the effects dual-listing affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange, particularly the market-based measure? Further investigation is suggested.

Based on assumption that there is CEO duality when the CEO and chairman is the same person, the effects of vice chairmen are not included in the measure of CEO duality. However, there are some H-share companies have their CEO duality by CEO and vice chairman. The presence of a vice chairman as CEO may produce duality effect or a moderator effect on firm financial performance. Future research is required.

1.7 Contributions

Given the ownership structure and special institutional environment of H-share companies, this study identifies board variables that are correlated positively or negatively the value of these Chinese firms that cross-list their shares on HKEx. The findings of this study provide useful evidence to identify whether the appointment of independent directors can improve corporate governance and provide additional value to the company, in turn, it contributes to the cross-listing literature in the study of corporate governance and firm performance. The
results have implications for both regulators and the investors in the other stock exchanges, such as London, NASDAQ, New York and Singapore where Chinese companies have their cross-listing.

This study addresses the governance problem more comprehensively using multiple theories, of agency, stewardship and resource dependence perspectives. Applying these concepts to corporate governance we can build on a broader interpretation of the casual effects of director independence, CEO duality and board composition on firm performance.

Very few studies have paid attention to the role of director age even though the information is available. This study provides investors with insights into factors such as director age and board size, affecting company value other than the requirements by regulations. In addition, both director independence and CEO duality, which are considered as important governance mechanisms for reducing the agency costs and increasing board independence, show no impact on firm profitability in the case of H-share companies. This study provides insights to regulators on designing governance reform for an effectively structured board to include measures that add value to companies, rather than reduce the costs associated with the separation of ownership and control in the case of H-share companies.

1.8 Dissertation Overview

This dissertation is presented in a five chapters structure proposed by Perry (1998) in the order of: Introduction (chapter one), Review of the Literature (chapter two), Methodology (chapter three), Data Analysis (chapter four) and Conclusions and Recommendations (chapter five). Chapter one discusses the background to this research, research problem and precise research questions. A review of the literature in chapter two discusses the relevant governance theories to be applied to the solving of the research problem, and an analytical review of the previous literature of this field exhibits, discusses and compares problems. The methodology in chapter three covers the discussion of the research paradigm, research process and the research method. The research problem of the study will be
precisely discussed with the research questions and corresponding hypotheses. Definitions of all tested variables are discussed and proposed precisely. Regarding chapter four, the findings of data analysis are exhibited from descriptive, correlation and regression analysis. Lastly, the conclusions and recommendations, chapter five discusses the findings of the research with conclusions, contributions, limitations and recommendations.
Chapter Two – Review of the Literature

2.1 History and Development of Corporate Governance

Corporate governance has been the subject of extensive scrutiny and controversy, particularly after the corporate collapses of the 2000s and the recent global financial crisis. Much of the controversy started in Western countries, inspired by the early study of Berle and Means (1932). This classic analysis of corporation control called into question the justification for shareholder wealth and rose in the problem of social ethics. However, Berle and Mean’s observations show a lack of empirical justification for the claims held by the shareholders. Fama and Jensen (1983) advocate the financial theory of risk-bearing which hinges on the separation of decision management and residual risk-bearing in the corporation. This separation and specialization of decision management and residual risk-bearing leads to an agency problem between agents and principals (Fama & Jensen, 1983). The governance problem is that those who bear the residual risk have no assurance that the managers will act in the shareholders’ best interests, and this, therefore, brings in the costs of monitoring and preventing the exercise of such discretion described as agency cost. The pre-occupation for corporate governance, then, is to mitigate the agency problem and agency cost between shareholders and managers. One of the possibilities is to use corporate governance as the mechanism for governing, including boards of directors, and to ensure sustainability through the financial structure proposed by Jensen (1986).

The World Bank (2009) defines corporate governance as the set of mechanisms available to shareholders for influencing managers to maximize the value of shareholders’ stock, and available to fixed claimants for controlling the agency costs of equity. The Organisation for Economic Co-operation and Development (OECD, 2004) defines corporate governance as a set of relationships among management, company board, its shareholders and other stakeholders. Both of them imply the principal-agent model of the corporation, and
emphasise the importance of shareholder interest and company value. Shleifer, and Vishny (1997) define corporate governance as a set of mechanisms to assure financiers that they will get a return on their investment.

Countries that have good corporate governance practices become not only attractive locations for domestic companies to develop and invest in (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998), but also for foreign investors, and, thus, they promote economic growth (Levine, 1999). However, corporate governance practices are different from country to country. Companies in different countries are operating in different social, cultural, legal and economic environments; as a result each country has developed its own corporate governance system that serves its business operations best (La Porta et al., 1998). As the globalization of business is speeding up, it is difficult to have one best practice system of governance for all countries. Numerous studies related to advanced economies that have focused on the relationship between corporate governance and firm performance therefore also have shown mixed or conflicting results.

Though it is difficult to generalise the model of corporate governance, Chen (2005) categorises three types of corporate governance models based on similarity of market conditions, legal systems and institutional environments. Firstly, the Anglo-American type is a market-oriented system based on developed capital markets: the information disclosure is comparatively transparent and it is a single-tier board system. Secondly, the family control type has been largely practiced in Asia based on the characteristics of concentrated ownership and control, and relationship-based business activities. Information disclosure for this is relatively weak. Thirdly, the German-Japanese type has a two-tier board structure and most companies finance mainly from banks with weak public disclosures and relatively collective decision-making. Based on market similarity, Hong Kong is categorised as an Anglo-American governance structure, but has the characteristics of concentrated ownership and control.

Corporate governance is an essential although quite indefinite concept. A definition has be provided both by the Cadbury Report (1992) and the OECD (2004): Corporate governance
involves a set of relationships between a company’s management, its board, its shareholders and other stakeholders. In addition to this, the OECD released a new version in May 2004 to include practices that are relevant across countries by advocating that good governance should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and shareholders (OECD, 2004). Clarke (2004) introduces the concept that corporate governance is about the exercise of power over corporate entities. Monks and Minow (2004) advocate that corporate governance is the relationship among various participants that determines the direction and performance of corporations. The primary participants are the shareholders, the management and the boards. For Hong Kong, in 2000, the Hong Kong Monetary Authority adopted the definition of the World Bank (2009) that corporate governance involves a set of relationships between a company’s management, its board, its shareholders, and other stakeholders.

In late 1980, after a report named “The role and composition of the board of directors of the large publicly owned corporation” issued by the Business Roundtable in January 1978 (BRT, 1978), which shifted the role of directors from being ornaments on a corporate Christmas tree to proclaiming the director’s main duties (Monks & Minow, 1992), the American debate on corporate governance started. However, it was not until 1989, that the Hong Kong Stock Exchange issued its first Code of Best Practice (Listing Rule). Despite the slow start, the evolution of the codes of good governance in capitalist countries, and the proliferation of those codes developed rapidly, particularly after the publication of Cadbury Report in 1992 (Stiles & Taylor, 1993). The emergence of codes in the 1990s correlated with the increasing discussion of shareholder value and faster globalization of stock market. The OECD issued the influential OECD Principles of Corporate Governance in 1999.

In addition, the World Bank (2009) promoted good corporate governance as part of the recommendations for transitioning economies, particularly in the 1990s. Countries that developed codes of good governance continue to develop codes in the face of new economic environments. By the end of 2010, there were more than 400 Corporate Governance Codes and Principles, and Recommendations, in the European Corporate Governance Institute’s codes database from countries all over the world (ECGI, 2010). In
view of the Asian crisis, corporate scandals and accounting frauds during 2002, the importance of corporate governance became dramatically clear. New legislation like the Sarbanes-Oxley Act revised the OECD principle in 2004 (OECD, 2004), and new listing rules were called for, thus regaining investor’s confidence.

2.1.1. Codes of Governance

Corporate governance codes are required to reduce the information asymmetries between shareholders and managers. It is widely acknowledged among regulators that principal-agency based regulation is vital for the development of financial markets. Indeed, codes of governance are a set of recommendations regarding the behaviour and structure of the board of directors of a company. They are designed to address the deficiencies in a corporate governance system by recommending the roles and composition of the board. Notwithstanding country particular, every code tends to emphasize the quality of companies’ board governance, and maximizing shareholders’ value. Likewise, encouraging the number of independent directors on a board, so as to ensure proper shareholder representation, is a general agreement across countries. Since 1990, discussions of corporate governance tend to refer to principles from the Cadbury Report (1992), the OECD Principles of Corporate Governance (2004), and the Sarbanes-Oxley Act (2002). The Cadbury and OECD reports present the general principles around which business entities are requested to operate so as to assure proper governance. Table 2.1 summarizes the factors that affect board independence by comparing the codes of corporate governance and governance practices for Hong Kong, UK, United States and OECD (for the countries with single tier board systems).
Table 2.1 Summary of the definitions of board independence (Hong Kong, UK, US, and OECD)

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Number of independent directors</td>
<td>At least one-third of the board</td>
<td>Except chairman, more than half of the board</td>
<td>More than half of the board</td>
<td>Sufficient number of non-executive independent directors</td>
</tr>
<tr>
<td>Independence of chairman</td>
<td>NA</td>
<td>Required</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Senior independent directors</td>
<td>NA</td>
<td>ONE</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Roles of chairman and CEO should be separated and not be held by the same individual</td>
<td>YES</td>
<td>YES</td>
<td>No requirement</td>
<td>YES</td>
</tr>
<tr>
<td>Nomination Committee</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Remuneration Committee</td>
<td>Majority of members should be independent directors</td>
<td>At least three independent non-executive directors</td>
<td>Comprised solely of independent directors</td>
<td>All or majority are independent directors</td>
</tr>
</tbody>
</table>

As noted Jensen (1993) documents the separation of ownership from control has been blamed for business failure and expropriation of shareholders’ wealth by managers. It is assumed that managers act in their own self-interests at the expenses of shareholders. Shleifer and Vishny (1997) narrowly define corporate governance as “how to assure shareholders that they get a return on their investment”. Governance is necessary whenever ownership is separated from management control. They ascertained that board quality and poor oversight has played an important role in the company’s failure. Some of these
failures are from accounting scandals and business frauds such as Ahold and Parmalat in Europe, OneTel in Australia, Enron Corporation and WorldCom (now MCI) in the United States, Barings in Singapore, Daiwa Bank and Sumitomo in Japan, Peregrine Investment in Hong Kong, as well as Euro-Asia Agriculture and ZhenBaiWen in China; these show that corporate governance is not just a problem for emerging market economies, but for developed countries as well (Rhoads, 2004). Examples of performance shortfalls and strategic missteps include, for example, companies like Hewlett-Packard, Merck, and Morgan Stanley. Most of the problems that created corporate failure and performance shortfalls can be traced back to the dysfunction of boards. In the late 1980s there were calls for corporate governance codes around the world, for example: Cadbury (1992), Greensbury (1995), Turnbull (1999) and Higgs (2003) for the UK; the code of best practice (1998) for Hong Kong; and the code from international agencies (1999) for OECD/World Bank. Despite these codes, problems have persisted in the 21st century, particularly after the global financial crisis.

### 2.1.2. Boards of Directors

Recent advances in economic theory suggest that the board of directors is an important part of the governance structure of large business corporations (Fama & Jensen, 1983). The board of directors has the power to hire, to fire and compensate senior management teams, and serves to resolve conflicts of interest among decision makers and residual risk bearers. This economizes agency costs associated with the separation of ownership and control. Thus, it is not surprising that the U.S. corporation laws require that the affairs of business corporations be managed under the guidance of a board of directors (SOX, 2002).

Baysinger and Butler (1985) find evidence for the proportion of independent directors being positively correlated with the accounting measures of performance, while Bhagat and Black (1999) mention that a high proportion of independent directors does not directly relate to better accounting performance. Fernandes (2008) documents that firms with more non-executive directors have less agency problems and have a better alignment between
shareholders and managers’ interests. Most of these empirical studies on whether there is a relationship between board composition and corporate performance have been conducted mainly in advanced and well developed economies. The evidence shows the effects of outside independent directors on firm performance is contradictory, mixed and incomplete. As Brown et al. (2011) suggest that a theory developed from multidisciplinary approach is required to better explain whether various corporate governance practices substitute for each other or are complements.

Good corporate governance is not just about complying with the rules set up by regulators, but is about the board’s performance contributing to company direction, and providing value to shareholders. Management runs the business; the boards ensure that the business is running in the right direction and being run well and sustainably. So, in this sense, the ultimate measure of board performance is the continuous accumulation of shareholders value.

2.2 Governance Theories

Mainstream corporate governance’s focus has always been on the agency theory, itself based on economics discipline in research with publicly listed companies that have dispersed shareholders. However, not every listed company is the same, for example the category of ownership structure (some state-owned, others family-owned companies). Dealing with agency issues in listed companies was a very important development, but perhaps this is too limited a view. There is more to corporate governance than this. A very different model of management is documented by stewardship theory, which has its roots in psychology and sociology, and argues that a steward’s utility functions are maximized when the manager protects and maximizes shareholders wealth through firm performance (Donaldson, Davis, & Schoorman, 1997). The focus of agency and stewardship theories is largely on internal monitoring regarding the problem of self-interest opportunism and information asymmetries; and then there is resource dependence theory that concerns the
external pressures of building relationships and securing resources in dynamic environments.

2.2.1 Agency Theory

Agency theory is statistically powerful, and is the most recognized theoretical approach applied to corporate governance (Shleifer & Vishny, 1997). Much research has used the agency theoretical method to investigate the relationships between governance attributes and firm performance based on published data. Some research finds some correlation between good governance and sound corporate performance, but some does not.

In 1776, Adam Smith (1776) introduced skepticism about the efficiency of joint stock companies because of the separation of management from ownership. This worry remained buried until Berle and Means (1932) hypothesized in their book that dispersed ownership is an inefficient form of ownership structure. Then Coase (1937), in his seminal paper on “The nature of the firm”, posited the concept of agency by pointing out that economies have no positive theory to determine the bounds of the firm. This concept has been further developed by Jensen and Meckling (1976), Fama and Jensen (1983) and Jensen (1986).

Jensen and Meckling (1976) define an agency relationship as a contract under which the principals engage the agents to perform company services on their behalf, which involves delegating the authority of decision-making to the agent. This principal-agent concept is concerned with how the principal can design a contract which motivates his agent to act in the principal’s interest. In fact, it is generally, the agent will not always act in the best interests of the principal. A principal-agent problem arises when there is asymmetric information. Agency costs, therefore, arise to limit divergences from their interests by establishing appropriate incentives for the agent and by incurring monitoring expenditures to limit the aberrant activities of the agent. Agency costs are the total costs of structuring, administering and enforcing the contracts written in a principal-agent setting. Fama and Jensen (1983) view an organization as a nexus of contracts. They clearly characterized the
agency problem by the separation of ownership and control, which opposes researchers from Adam Smith (1776) to Berle and Means (1932), and Jensen and Meckling (1976).

Under corporations law, the major players in formal decision-making structures are the members of the board of directors who are empowered to oversee the strategic directions and the decisions affecting the business and affairs of the corporation. Shareholders have no power to initiate corporate actions and, indeed, are entitled to approve or disapprove only very few board decisions. Such separation of ownership and control is one of the corporation’s essential attributes, and it is also one of its most controversial attributes.

In *The Modern Corporation and Private Property*, Berle and Means (1932) identify three types of public corporations, classified according to the nature of share ownership within the firm, majority control, minority control and managerial control. Managerially controlled corporations emerged, according to Berle and Means (1932), because stock ownership was dispersed amongst many shareholders, especially in the case of publicly listed corporations. In turn, Berle and Means (1932) believe that dispersed ownership was inherent in the corporation system.

Facing tremendous technological changes from modern mass production techniques for economies of scale and global competition, corporations require enormous amounts of capital, which far exceeds the resources of most individuals or families. They are financed by aggregating many small investments, which is accomplished by selling part of the ownership to many investors. While the separation of ownership and control facilitates the growth of large corporations, Berle and Means (1932) recognize that the separation, in due time, creates the potential for shareholders and managerial interest to diverge. Consistent with this, Alchian and Demsetz (1972) assert that there is no agency cost when an entrepreneur wholly owns and runs the business by himself. When the enterprise increases in size, the entrepreneur needs to employ outsiders to relieve the workload. The more that is contracted out, the less control of the enterprise as the entrepreneur finds that paid employees cannot work the way that is needed on their own. This is the separation of
ownership and control as asserted by Berle and Means (1932), Jensen and Meckling (1976), and Fama and Jensen (1983).

As new shareholders are taken into the company through going public, the new owners obtain both residue claimant rights as well as residue control rights. But it is the board’s directors and managers who decide how to spend the corporation’s earnings. Accordingly, there is the possibility of risk to shareholders that directors or managers will spend the company’s earnings on projects more benefiting themselves than the shareholders. The agency problem and cost is exacerbated when ownership become more dispersed.

Given the importance of the separation of ownership and control to the problems of corporate governance, researchers have focused on the principal-agent relationship between owners and managers of large, public corporations (Berle & Means, 1932). Fama and Jensen (1983) describe the role of the board of directors as an information system that the stockholders within large corporations can use to monitor and administer the opportunism of managers.

### 2.2.2 Stewardship Theory

Agency theory posits a conflict of interests between managers and owners (Jensen & Meckling, 1976). Agency theorists argue that shareholder interests require protection due to a separation of ownership and control. The board is responsible for resolving the “conflict of interests” issue between shareholders and managers. Stewardship theory is an alternative view in which managers act as responsible stewards of the assets they control. Stewardship theorists argue that shareholder interests are maximized by a shared incumbency of these roles (Donaldson & Davis, 1991). The managers are far from being opportunistic followers; instead, they perceive their interests to be aligned with that of their corporation through an expectation of future employment (Barney, 1990).
Agency theorists state that managers are opportunistic and managers perform better under self-regulation. However, firms are not necessarily homogeneous in their agency governance structures. Agency theory, in some cases, fails to find consistently that more controls on managers result in better the firm performance. Although agency theory addresses manager-principal interest divergence, it is necessary to recognize a broader view of human motives than those drawn on agency theory (Arrow, 1985).

Stewardship theory defines cases in which managers are not motivated by personal goals, but rather are stewards whose motives are aligned with objectives of their principals. If the manager’s motivations fit the model underlying stewardship theory, empowering governance structures are appropriate. The question is, “How much the manager can be trusted”. Therefore, within the governance contract, principals must decide how much risk they are willing to take with their wealth. Table 2.2 compares Agency theory to that of Stewardship theory.

**Table 2.2 Comparison of Agency and Stewardship Theory**

<table>
<thead>
<tr>
<th></th>
<th>Agency Theory</th>
<th>Stewardship Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model of man</td>
<td>Economic man</td>
<td>Self-actualizing man</td>
</tr>
<tr>
<td>Behavior</td>
<td>Self-serving</td>
<td>Collective-serving</td>
</tr>
<tr>
<td>Motivation</td>
<td>Lower order/ economic need</td>
<td>Higher order needs intrinsic</td>
</tr>
<tr>
<td></td>
<td>extrinsic</td>
<td></td>
</tr>
<tr>
<td>Social comparison</td>
<td>Other managers</td>
<td>Principal</td>
</tr>
<tr>
<td>Identification power</td>
<td>Low value commitment</td>
<td>High value commitment</td>
</tr>
<tr>
<td>Power</td>
<td>Institutional</td>
<td>Personal</td>
</tr>
<tr>
<td>Management philosophy</td>
<td>Control oriented</td>
<td>Involvement oriented</td>
</tr>
<tr>
<td>Risk orientation</td>
<td>Control mechanism</td>
<td>Trust</td>
</tr>
<tr>
<td>Time frame</td>
<td>Short term</td>
<td>Long term</td>
</tr>
<tr>
<td>Objective</td>
<td>Cost control</td>
<td>Performance enhancement</td>
</tr>
<tr>
<td>Cultural differences</td>
<td>Individualism/ high power</td>
<td>Collectivism/ low power</td>
</tr>
<tr>
<td></td>
<td>distance</td>
<td>distance</td>
</tr>
</tbody>
</table>

Source: Donaldson, Davis and Schoorman (1997)
2.2.3 Resource Dependence Theory

Stiles and Taylor (2002) explain resource dependence theory as another dimension of corporate governance from which to view an organizations transacting with the environment in an open system. Resource dependence theory was a theory formalized in the 1970s, with the publication of *The External Control of Organizations: A Resource Dependence Perspective* (Pfeffer & Salancik, 1978). Resource dependence theory has implications regarding the recruitment of board members and employees, production strategies, contract structure and external organizational links. Pfeffer (1972) documents that company board size and composition are rational organizational responses to the conditions of the external environment. Directors serve to effectively link the firm with external resources that help to overcome uncertainty, and it is essential to cope with uncertainty for company survival (Pfeffer & Salancik, 1978). Directors benefit the companies depending upon their access to valued resources and information, and the reduction of external uncertainties (Daily & Dalton, 1994). In this sense, the most important role of the board of directors is to obtain scarce resources most benefiting the companies (Johnson *et al.*, 1996; Pearce & Zahra, 1989).

2.3 The significance of H-share companies in the Hong Kong stock market

China’s continued growth as one of the world’s major economic engines in the 21st century has been attracting an increasing number of researchers to their economic transition and emergence to the second largest economy in the world (Martin & Harris, 2012). In the 1990s, in order to access foreign investment funds, the Chinese Government allowed state-owned enterprises to issue and trade their shares on major international stock exchanges like Hong Kong, New York, Singapore and London. The Hong Kong Stock Exchange has now become one of the largest equity markets for Chinese companies to cross-list their shares. As at the end of 2010, Hong Kong reported that there were 592 Mainland
enterprises listed on the Main Board and GEM, constituting 57% by market capitalization (HKEx, 2010). Eleven H-share companies were ranked in the 50 leading companies for market capitalization which have a total equity of 13,207 billion, constituting 62.66% of the total market capitalization (HK$21,077.0 billion). With a market capitalization of HK$1,675 billion, China Construction Corporation (H-share) was ranked the biggest firm listed on the Main Board. Among the listed companies on the Main Board there were 144 H-share companies constituting a year-end market capitalization of HK$5,210.3 billion (Note: market capitalization represents the value of the H shares only, not that of the entire issued capital of the enterprise) and 24.72% of the total market capitalization (HKEx, 2010). This compares with the market capitalization of HK$4,686.4 billion as at the end of 2009 (HKEx, 2009), reflecting an 11.18% increase. H-share companies have become more and more important to the Hong Kong equity market since the first listing in 1992.

Mainland China is perceived to have an underdeveloped legal system. In contrast to this, as a common-law based cosmopolitan of market-oriented economy, Hong Kong is recognized as a well-developed market economy. Hong Kong was one of the places in Asia that did not face the disastrous shock in the 1997 Asian financial crisis. Although it is not a prime example of sound corporate governance when compared with many western countries, it is certainly in a better position than most of its regional counterparts. Hong Kong’s corporate environment comprises locally based and family-owned companies, long established corporations linked to the UK and multinationals from the US, Europe and Japan. In terms of corporate structures and management practices, for many Chinese enterprises, Hong Kong is a unique business hub with a Chinese flair, in which corporate law and governance mechanisms were introduced as a new concept to them, but they have retained the Chinese culture of harmony.

2.4 H-share Companies in Hong Kong

H-share companies are the companies incorporated in mainland China under the Chinese laws. Shares of these Chinese companies are listed on the HKEx, and subscribed for and
traded in Hong Kong dollars. In the 1990s, the Chinese government allowed some approved state-owned enterprises to issue and trade their shares outside China on major international stock exchanges like Hong Kong, London, New York and Singapore. Surveys by Fanto and Karmel (1997) found that managers of companies from outside of the U.S. choose to list their shares on the U.S. market as they perceive benefits from cross-listing more than the cost of meeting the SEC reporting compliance requirements, as well as the legal costs of listing. Such benefits include lower cost of capital, wider shareholders’ base, increasing stock liquidity and more international exposure and prestige. In the case of the H-share companies, the major reasons for listing state-owned enterprises on the HKEx are to access foreign investment funds and to stimulate improvements in management by exposing internal operations to the scrutiny of investors and external analysts.

H-share stocks have been traded in Hong Kong since 1992. TsingTao Brewery became the first Chinese state-owned enterprise listed in Hong Kong in 1992. The Beiren and Shanghai Petrochemical’s listing came after the TsingTao’s H-share trading on HKEx. As at the end of year 2010, 144 H-share companies issued and traded on the Main board of the Hong Kong Stock Exchange.

In the case of H-share companies, the differences arise because the process of corporatization is different from the concept of privatization as understood in other countries. The privatization of H-shares involves a partial transfer of control over publicly owned assets in the private sector, while the Chinese government still retains control over Hong Kong-listed and formally state-owned companies. In this regard, the fundamental deficiencies are dominant of the state as the majority shareholder; non-transferability of most state-owned shares; a weak position of minority shareholders; the lack of real powers held by independent directors; and the lack of transparency due to accounting standards. The problems in this regard to H-share companies have led to difficulties in separating government and corporations, and ensuring the minority shareholders are taken care of.

Previously, it was noted, the World Bank defined corporate governance as the set of mechanisms available to shareholders for influencing managers to maximize the value of
stock and to control the agency costs of equity (Tenev & Zhang, 2002). The OECD (2004) defined the principle of corporate governance as a set of relationships between a company’s management, its board, its shareholders and other stakeholders. Cadbury (1992) states “corporate governance is the system by which companies are directed and controlled”. Cornelius (2005) proposes that “corporate governance can be defined as the stewardship responsibility of corporate directors to provide oversight for the goal and strategies of a corporation and foster their implementation”. All these definitions imply the concept of the principal and agent model of the corporation which has been well accepted in western society.

H-shares are issued by Chinese public limited companies to foreign investors through listing on the Hong Kong Stock Exchange. However, the majority ownership of the H-share state-owned enterprise is by Chinese governmental agencies like a state ministry or local government (Chan, 1996). Therefore, the H-shares companies remain under state control, and government representatives participate actively in firm upper management on behalf of state interests. This means that H-share companies are inevitably affected by the political and social preoccupations of the Chinese government, but, at the same time, must comply with the laws and regulations made by the Hong Kong legal system and the Hong Kong Stock Exchange.

H-share companies operate within, and according to, the rules of two different legal and institutional systems. The corporate governance practices within Chinese incorporated firms are seen as deficient in their operation. On the contrary, Hong Kong is generally perceived as having a well-developed market economy with a set of regulatory controls that meets western standards. The most important problems in regard to H-share companies have been the difficulty of separating government and enterprises, and ensuring the benefits of other shareholders. Agency theory is discussed in the management literature in terms of a separation of ownership from management given the economic principles of capitalism. Corporate governance practices and agency theory in the socialist context of China is still in the early stage of implementation. On the contrary, Hong Kong is generally perceived as having a well-developed market economy, with a set of regulatory controls that meets
western standards. Differences created by such unique settings exacerbate agency costs and principal-agent dilemma. H-share companies are encouraged to better regulate themselves and thus act in the best interest of their shareholders. Numerous studies have focused on the relationship between corporate governance practices and firm performance. The role of independent directors and their effectiveness on corporate boards has recently attracted much attention.

2.5 The Corporate Governance Code for Hong Kong Listed Companies

As a Special Administrative Region of China and a former British territory, Hong Kong operates under a constitution in the form of Basic Law. Directors on boards have similar responsibilities as directors in the UK. Effective as at 1 January 2005, the Hong Kong Stock Exchange published the New Hong Kong Code of Corporate Governance as the Main board listing rules and requirements to replace the former the Code of Best Practice from 1993 and the Guidelines on INEDs from 1994. The Code Provisions operate on a comply-or-explain basis that is based on the Recommended Best Practices, where companies are required to explain non-compliance. The Code has five sections covering directors, remuneration of directors and senior management, accountability and audit, delegation by the board of directors, and communication with shareholders.

The board of directors is deemed important enough to warrant full compliance and is described as the leader of the company. Hong Kong employs a one-share-one-vote governance system. In this one-board system, directors of the board are elected by the general meeting of shareholders. Then the board of directors appoints the chairman and CEO of the company to take charge of the running of the company. The Code recommends that the roles of the chairman and the chief executive officer should be separated and set out in writing. Their names, relationship and separation of roles should be disclosed in the corporate governance report. Effective from 30 September 2004, every Hong Kong Main Board listed company is required to have a minimum of three independent directors
(INEDs) or INEDs must comprise at least one third of a board (HKEx, 2004). The company must disclose the composition of the board by category of directors, including the names of the chairman, executive and non-executive directors (NED), as well as INEDs in the corporate governance report. The difference between a NED and an INED turns upon whether the NED holds more than 1% of the issued share capital of this company. In addition, the Code requires the reasons for resignation or removal of an INED to be provided by the listing company to the Hong Kong Stock Exchange. A remuneration and audit committee should be established, the majority of which should be INEDs (HKEx, 2004).

As noted, the heart of the matter of corporate governance is the conflict of interests between shareholders and managers. As the representative of shareholders, the board is responsible for resolving the “conflict of interest” issue between shareholders and managers. The key role of the board is to monitor the management in order to reduce agency costs, and ensure the maximization of shareholders’ wealth. Corporate governance is thus concerned with how the board of directors oversees the organization and manages the CEO (Farrar, 2001).

2.6 Board Composition

Although boards of directors are a legal mechanism, views on the roles of the board are mixed and differ across jurisdictions. An effective board is assumed as an internal mechanism of control that provides effective oversight function. Thus, apart from the requirements of the Code of Corporate Governance on the percentage of INEDs and CEO duality, this research also seeks to investigate the relationship between director ages, board size and gender diversity to firm financial performance as well. Although the Code of Hong Kong does not attach any requirements or suggestions to the board composition, they are important to firm performance.
2.6.1 Independent Directors

The Corporate Governance Code for Hong Kong Listed Companies suggests that every listed company on the Main board of the Hong Kong Stock Exchange should comprise no fewer than three independent directors. Regarding the remuneration and audit committee, it should be established such that it has a substantial majority of independent directors. The boards of directors of the US listed companies are dominated by independent directors. However, many commentators and institutional investors believe that independent directors should be even more numerically dominant on the boards of publicly listed companies than they are today (Bhagat & Black, 2002). However, the question of what number of independent directors on each board is the most appropriate to firm performance is still unanswered.

There is no universally accepted definition for independent directors. In New Zealand, independence means only non-executive (FMA, 2004). In Australia and Norway, independent directors are not supposed to have any business relationships or be in a competing business (NCGB, 2009). Companies in different countries are operating in different social, cultural, legal and economic environments (Chibuike & Iwu-Egwuonwu, 2011). Each country has developed its own corporate governance system that best serves its business operations. As a result, the criteria for defining an independent director are subject to meeting the requirements provided by each country’s regulatory authorities. However, Chibuike and Iwu-Egwuonwu (2011) define the independent director as a director who is independent in character and judgment, and does not have any material relationship with the company. This is accepted for this research.

Prior studies do not establish a clear correlation between board independence and firm performance. Vance (1964) asserts a positive correlation between the proportion of inside directors and firm performance. Baysinger and Butler (1985) report that the proportion of independent directors in 1970 correlates with a 1980 return on equity. However, Yermack (1996) finds a significant negative correlation between the proportion of independent directors and Tobin’s Q which is the ratio of the market value of a firm’s asset to the
replacement cost of the firm’s asset (Tobin, 1969). Agrawal and Knoeber (1996) report a negative correlation between the proportion of outside directors and Tobin’s Q.

The study by Chibuike and Iwu-Egwuonwu (2011) finds the evidence on the effectiveness of independent directors at ensuring superior firm performance is not only mixed, but may also be culture-bound. Rebeiz (2008) asserts that boards comprising more independent directors positively impact on the financial performance of the firm. However, the relationship is not linearly correlated, but curvilinear with a negative concavity. This implies that there is an optimum board composition and a limitation on the agency theory.

Rebeiz (2008) argues that inside directors provide valuable knowledge of the products, processes and culture of the firm. In the aftermath of the Asian crisis of 1997, for South Korea, the study of Choi, Park and Yoo (2007) provides evidence of a positive relationship between board independence and superior firm performance. They comment that board independence is critical in post-crisis emerging markets where there is a lack of sufficient liquidity, and firms are subject to economic instability and external financial shocks.

However, another study by Kumar and Sivaramakrishnan (2008) concludes that shareholders’ value or firm performance can be improved when board members are more dependent on the CEO or management team, but it decreases with more board independence. An empirical analysis by Krishna (2006) produces no evidence to confirm any relationship between board independence and the maximization of firm value or performance. The research adds that the result may be attributable to the fact that in India the companies surveyed were still in the early stage of implementing the corporate governance reforms.

Bhagat and Black (2002) conclude that firms with more board independence do not perform better than other firms. Another survey by Bhagat and Black (1999) researched “the uncertain relation between board composition and firm performance” and not only found no evidence that board independence positively correlates to firm performance, but that firms with supermajority independent boards are less profitable than other firms. These
findings matched with Klein (1998) who, in the study of “firm performance and board committee structure”, asserts that the audit, nomination and compensation committees dominated by independent directors do not have any effect on firm performance. Instead, Klein found a positive relationship between firm performance and a greater percentage of inside directors.

Much controversy still attends the subject of independent directors. Some scholars argue for independent directors to be elected through the nomination process by the board members. Are they really independent? The extent of the controversy on the subject of independent directors reflects that it is presumed to plays an important role in the corporate governance of modern organizations, especially the effect on firm performance. A great amount of research conducted in Asia tends to confirm the conventional wisdom that board independence assures superior firm performance. While much of the studies executed in the United States and Australia have found no definitive evidence that board independence establishes positive impact on firm performance, the evidence has been presented is not only mixed, but is also subject to differences in relation to social, cultural, legal and economic environments. The answer can only be found with further studies, and more attention to the definition of variables like ‘independent’ directors.

2.6.2 CEO Duality

When the chief executive officer (CEO) also serves as a chairman of the company, this is known as CEO duality, and a dual CEO board structure. Does CEO duality contribute to firm performance? This is, up to this moment, one of the controversial and inconclusive questions in corporate governance. However, Chaganti, Mahajan and Sharma (1985) assert that the existence of CEO duality is expected to have a negative impact on board independence because the power of the chairman of the board is centered on the CEO. Furthermore, conflicts of interest may arise because a CEO is a full time manager and is responsible for the whole operation and strategic implementation of the company, whereas
the chairman is responsible to monitor the executive directors and CEO (Weir & Laing, 2001)

Recently, rather a significant number of firms changed from a dual CEO board structure to a non-dual structure. Faley (2007) finds a tendency that CEO duality is becoming less popular in the US. The proportion of corporations in the US with CEO duality drops from about 65.5 percent in 1999 to about 60% in 2003 (Chen, Lin, & Yi, 2008). In many countries, regulators and investors have become strongly supportive of a separation of CEO and chairman duties. Consistent with this, the Corporate Governance Code of Hong Kong (2010) recommends that the roles of the chairman and the chief executive officer should be separated. However, theoretical and empirical studies still provide no consensus that non-dual CEO board structure outperforms dual CEO structure, or vice versa. Agency theory suggests that CEO duality hinders firm performance because of the compromise the roles of monitoring and control of the organization (Rechner & Dalton, 1991). Having the CEO chair the board will nullify board independence due to the absence of separation of management and control. In contrast, stewardship theory argues that CEO duality is good for performance due to the unity of the CEO and board chair roles (Donaldson & Davis, 1991). Empirical evidence is inconclusive on whether a non-dual structure is associated with better firm performance.

Reviewing thirteen studies those providing statistical evidence regarding the impact of CEO duality on firm performance, Harris and Helfat (1998) find that only three of these studies show a negative impact of CEO duality on firm performance. In terms of firm characteristics, Faley (2007) finds that organization complexity, CEO reputation and managerial ownership increase the probability of CEO duality. Fama and Jensen (1983) mention that CEO duality may hinder a board’s ability to monitor management and increase the agency cost. Pi and Timme (1993) find that there is a negative relationship between CEO duality and accounting performance in the industry of banking. In contrast, Donaldson and Davis (1997) find that the return on equity to shareholders is improved by combining, rather than by separating, the positions of chairman and CEO. Dahya and Travlos (2000) argue a positive relationship between CEO duality and firm performance.
However, Baliga, Moyer and Rao (1996) find no evidence of performance changes on change of duality status. Daily and Dalton (1997) find no significant difference in company performance between either CEO duality or non-CEO duality. Dahya, Galguera-Garcia and Bommel (2009) mention that separating the chairman and chief executive officer of the board among the UK companies has no effect upon performance improvement.

The leadership structure of a firm seeks to maximize firm value. Each type of leadership structure has its benefits and costs to the firm. The empirical evidence, largely from developed economies, pertaining to whether combining or separating the leadership is beneficial to the firm is then an empirical question; and to date results are inconclusive.

2.6.3 Director Age

Boards lead and control companies, and, therefore, an effective board is fundamental to the success of the company. The board is responsible for determining the company’s goals and strategies, via plans and policies to achieve those goals; and monitoring progress in the achievement of those goals. One of the characteristics of a board is the average age of its board members. While older directors benefit from greater experience, at the same time, their high degree of risk aversion correlating to their age may have a less favorable effect on firm performance. However, few studies have paid attention to the role of board age. Bonn, Yoshikawa and Phan (2004) compare the performance of Australian and Japanese boards, but their study is restricted to a small sample of large firms. Faley (2007) includes board age as a simple control variable to evaluate the result of a staggered board.

Yet, previous research suggests that top management characteristics affect corporate decisions and a firm’s ability to take risks which may have a critical impact on firm performance. Vroom and Pahl (1971) observe a significant negative relationship between director age and both risk taking and the value placed upon risk. That means older board members are more likely to avoid making risky decisions. Likewise, Child (1974) asserts that older managers prefer to execute low-growth strategies, whereas younger managers
tend to take innovative and high-growth policies. Matta and Beamish (2008) highlight the negative impact on international acquisitions using the related notion of the decision horizon, which normally decreases with the age of the manager.

Considering agency conflicts, because of their age, older managers have less time to wait for a high-risk project to eventually payoff. Older managers normally have more capital tied up in the firms, so it is likely that they prefer to take less risk (May, 1995). Based on this consideration that director age is negatively related to risk-taking and the fact that risk-taking affects firm performance, the question in this study is whether older boards achieve a lower performance.

### 2.6.4 Board Size

Jensen (1993) comments that a firm may have a preference for a smaller board because of technological and organizational change which leads to cost cutting and downsizing. Hermalin and Weisbach (2003) point out that a larger board can be less effective since agency problems may increase when boards consist of too many members. When a board becomes too big, it often moves into a more symbolic role, rather than fulfilling its intended function of directing the company in the right direction. However, Dalton and Dalton (2005) argue that large boards are more likely to display board diversity in terms of experience and skill. Small boards lack the advantage of having the spread of expert advice and opinion found in large boards. Furthermore, expropriation of wealth is relatively easier with a smaller number of non-executive and independent directors.

Empirically, Yermack (1996) finds significant negative association between board size and performance. Bhagat and Black (2002) find no evidence on the relationship between board size and performance. They comment that board size is endogenously related to other control variables that may correlate with performance. In an attempt to compare the relationship between board structure and firm performance between Japanese and Australian firms, Bonn, Yoshikawa and Phan (2004) find that board size and performance
are negatively correlated for Japanese firms, but find no effect for their Australian counterparts. Lipton and Lorsh (1992) recommend limiting the number of directors on a board to seven or eight, as numbers beyond that will be difficult for the Chairman/Chairperson to control. A large board results in a lack of cohesiveness. The results show mixed and inconclusive.

2.6.5 Gender Diversity

An increasing trend is the amount of the female participation on boards and the relationship between gender diversity and firm value has created much interest amongst academic and regulators. Carter, D’Souza, Simkins and Simpson (2010) report a significant positive correlation between board representation by females and the firm value measured in terms of the approximation of Tobin’s Q on Fortune 1000 companies. A similar study by Erhardt, Werbel and Shrader (2003) points out a positive link between the board diversity and return-on-asset for a sample of large firms in Fortune magazine. In Spain, Campbell and Minuez-Vera (2008) find the percentage of female directors results in positive impacts on firm performance. From a sample of 2500 Danish companies, Smith, Smith and Verner (2006) find a positive result with firm accounting-based performance.

In contrast, using the data of all the listed companies in Denmark from years 1998 to 2001, Rose (2007) finds no significant relationship between the fraction of women board members and Tobin’s Q. In the US many studies do not find gender diversity to be a significant determinant upon firm financial performance (Blackburn, Iles, & Shrader, 1997; Farrell & Hersch, 2005; Hussein & Kiwia, 2009; Pearce & Zahra, 1989) and in Denmark (Rose, 2007)

Adams and Ferreira (2009) mention that a gender diverse board tends to devote more monitoring efforts to the firm performance in terms of the measurement of attendance behavior. In addition, Carter, D’Souza, Simkins and Simpson (2010) assert that more gender diversity enhances corporate governance and therefore improves the firm’s
financial performance. Most of these studies have been done in advanced and developed economies, whether gender diversity on boards is beneficial to companies is then an empirical question; and to date results are mixed.

2.7 Key problems and research questions on H-share Companies

After the Asian financial crisis, a number of challenges need to be addressed before minority shareholders can receive a comprehensive level of protection. Providing effective corporate governance is one of the necessities if Hong Kong wishes to retain its edge. With the objective of introducing better governance practices and protecting the interests of all shareholders, effective from 1st January of 2005, the Code of Corporate Governance of Hong Kong requires listed companies to have a minimum of three or one-third of INEDs on a board, and the roles of chairman and CEO should not be filled by the same individual. Although a number of measures have been adopted to improve the corporate governance standards in Hong Kong, is the new Code of Corporate Governance effective enough to safeguard all shareholder interest, particularly in the case of H-share companies?

After reviewing the literature, the key issues for the research reported here are as follows:

1. All H-share companies are incorporated in China, but are not subject to some relevant laws of Hong Kong.
2. The majority of shareholders of the H-share companies are Chinese governmental agencies.
3. There is high ownership concentration and low free floats of shares.
4. There is weak legal protection for minority shareholders.
5. Manipulations of controlling shareholders are evident.
6. There is a lack of corporate transparency.

Monks and Minow (2004) point out that a corporation is a mechanism established to allow different parties to contribute capital, expertise and labor for the maximum benefit of all of
them. Good governance may not guarantee better performance of a company, but good corporate governance is for the reasons noted are likely to be even more important in the case of H-share companies.

Executive runs the business, while the board ensures that the business is managed in the right direction and managed well. A board has significant impact on an organization’s success, as it is given fifteen minutes to make decisions that could cause the organization either great harm or success. If a board fails, the company arguably will fail.

The research problem is then, “Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?”

There is no consensus about the value of a good board, not just in the developed countries; it is notably unanswered for the situation of H-share companies.

Regarding a good performing board in H-share companies, the research questions and the corresponding hypotheses are as follows:

Research question 1: “Does the percentage of independent directors affect firm performance?” Agency theory, stewardship theory and resource dependence theory support independent directors could protect shareholder interests and build external networks for accessing external resources. Thus, these hypotheses (H1 and H1-1) are established as:
Hypothesis H1: The percentage of independent directors correlates positively to return on equity.
Hypothesis H1-1: The percentage of independent directors correlates positively Tobin’s Q.

Research question 2: “Should the CEO also be the chairman of the board?” An implication of agency theory is that where CEO duality is retained, shareholder interests may not be protected by interest divergence of CEO and shareholders. Because of this principal-agent dilemma, these hypotheses (H2 and H2-1) are established as:
Hypothesis H2: CEO duality correlates negatively to return on equity
Hypothesis H2-1: CEO duality correlates negatively to Tobin’s Q

Research question 3: “Does board age have an impact on firm performance?”
Agency theory supports that boards becomes less effective as the average age of their board members rises. Thus, these hypotheses (H3 and H3-1) are established as:
Hypothesis H3: Average director age of a board correlates negatively to return on equity
Hypothesis H3-1: Average director age of a board correlates negatively to Tobin’s Q
Stewardship theory and resource dependence theory have an opposite view on the relationship between director age and firm financial performance. Thus, a second set of hypotheses (H3-2 and H3-3) are established as:
Hypothesis H3-2: Average director age of a board correlates positively to return on equity
Hypothesis H3-3: Average director age of a board correlates positively to Tobin’s Q

Research question 4: “Does board size affect firm performance?”
To follow the research of Jensen (1993), hypotheses (H4 and H4-1) are established that board size negatively correlates to firm financial performance based on agency theory.
Hypothesis H4: Board size correlates negatively to return on equity.
Hypothesis H4-1: Board size has negatively correlated to Tobin’s Q.
Another set of hypotheses (H4-2 and H4-3) are established to test the positive relationship based on the opposite view of stewardship and resource dependence theory.
Hypothesis H4-2: Board size correlates positively to return on equity.
Hypothesis H4-3: Board size correlates positively to Tobin’s Q.

Research question 5: “Does gender diversity affect firm performance?”
Hypothesis H5: Gender diversity correlates negatively to return on equity.
Hypothesis H5-1: Gender diversity correlates negatively to Tobin’s Q.
Figure 2.1 Summary of the links between the research problem, the research questions and the corresponding hypotheses.

Research Problem “Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?”

Research Question 1 INED
Research Question 2 CEO Duality
Research Question 3 Director Age
Research Question 4 Board Size
Research Question 5 Gender Diversity

Hypothesis H1
Hypothesis H2
Hypothesis H3
Hypothesis H4
Hypothesis H5

H1-1
H2-1
H3-1
H3-2
H3-3
H4-1
H4-2
H4-3
H5-1
Research Questions are developed to align the research problem. The findings of each research question are predicted in advance based on the theories of agency, stewardship and resource dependence. Hypotheses are developed with respect to each of the research question. Hypotheses are deduced from the theories, so that the research tests the theories behind the hypotheses when testing the hypotheses.

When globalization is speeding up, how should a cross-listed company like H-share companies in a complex and dynamic environment today be governed? Those research questions listed above remain unanswered and inconclusive, particularly in the case of H-share companies.

With the increasing importance of corporate governance, particularly after the event of Enron and the recent financial crisis, corporate boards will be under much stricter and wider scrutiny. Barnes (2009) finds that the use of independent board members is a governance mechanism supported by most of the international stock exchanges, including Hong Kong Stock Exchanges, however, the adequate number of independent directors varies from country to country.

As noted the presence of independent directors and the separation of CEO and board chairman are the major issues of international debate. Most of the studies have been done in advanced economies, and yet the empirical results on the relationship of these two issues on firm performance are mixed and inconclusive. A lack of studies has been undertaken in the context of transitional economies, particularly in the case of H-share companies. This study makes a contribution to the literature by empirically addressing the issue of the relationship between board independence and firm performance on the cross-listed Chinese firms (H-share companies) which are doing business in a socialist economy (Mainland China) but list a portion of their outstanding shares and conform to the rules and requirements of the Hong Kong Stock Exchange which is categorized as an capitalist and market economy. Although Chinese companies have made substantial progress in recent years to improve corporate governance, many problems still exist. Lin (2004) identifies that the corporate
governance problems in China are linked to the high concentration of ownership and control, high insider control, weak protection of shareholder rights and weak adherence to board independence. The focus is on how board independence and associated board characteristics relate to firm performance in terms of both market and accounting valuation. The criteria for an independent director are based on the Hong Kong Corporate Governance Practices of 2004, even though the Chinese listed firms are doing business in China, as they listed their shares on the Hong Kong Stock Exchange. The objective of this study is to gain a better understanding on whether there is a relationship between board independence and firm performance measured by return on equity, Tobin’s Q and price-to-book ratio. This is undertaken by considering the impact on performance of: percentage of independent directors, leadership structure in terms of CEO duality, and board composition in terms of board age, board size and gender diversity.

Chapter three will elaborate the research method to test the hypotheses generated from the corresponding research questions. It will show how the hypotheses have been developed based on the research questions to test on a sample of 109 H-share companies over the period of 2008 to 2010 with the help of ordinary least square (OLS) regressions as the analysis method for each variable: INED, CEO duality, board age, board size and gender diversity. Chapter four will analyze the data by using SPSS and show the findings accordingly. Conclusions, recommendations and contributions will be discussed in chapter five.
Chapter Three – Methodology

3.1 Research Methodology

Research is the process of finding solutions to a problem. It follows a systematic and organized study and analysis to examine a research problem encountered in the work setting. It comprises the processes that are designed and executed with the objectives of finding an answer to the research problem. The answer provided is the result of careful analysis of either primary data or secondary data gathered. The data collected can be quantitative or qualitative. Quantitative data is generally collected through structured research questions. Qualitative data is generally gathered from broad answers to research questions through interviews, open-ended questions in questionnaires or through observations.

The types of research methods that can be undertaken include quantitative, qualitative and mixed methods (Bryman & Bell, 2007). Quantitative research is applicable to research phenomena that can be expressed in terms of quantified data (Bryman, 2007). Qualitative research allows the researcher to get close to the data, for example, to know well all the individuals on a corporate board and in the company and observe and record what they do (Mintzberg, 1979). Data for research is mainly from field data, interview data and the existing literature that is relevant to the research. It is aim of the research to acquire an in-depth understanding of human behavior. Regarding the data collection, the most common methods of qualitative research are: grounded theory practice, qualitative research interviews, case studies and literature reviews.

**Grounded theory** was developed by Glaser and Strauss (1967) as a general methodology of analysis linked with data collection to generate an inductive theory, particularly as a strategy for qualitative research. There have been relatively few published qualitative research studies on the theme of board composition and firm financial performance using
the grounded theory approach. Despite this, this method is a suitable approach to produce research that is relevant to boards and governance theories.

**Interview approach** was conducted by LeBlanc and Gilles (2010) as a qualitative research on directors’ behavior and board level observations in order to demonstrate that directors’ behavior and individual characters affect governance outcomes. The interview approach may be influenced by personal judgments, self-centered reporting and biased insights.

**Case research** produces insights into corporate governance by Monks and Minow (2004). Critics of the case approach argue that case evidence is statistically irrelevant. The counter-argument is that corporate governance is about human beings’ activities, not a statistically-controlled group of experiment. However, one director may have strengths in some areas and weaknesses in others, another may possess complementary qualities. It is difficult to measure the differences in behavior and to quantify them for statistical study.

**Literature review** was used by Bhagat and Black (1999) to investigate how board composition influences the behavior of a board and to examine the differences in the behavior of majority-independent and non-majority-independent boards. Majority-independent boards may perform better on a particular task, but they could perform worse on others leading to no significant benefit in overall firm performance. A literature review of corporate governance is done by Brown *et al.* (2011) to posit that a multidisciplinary approach to developing better theory could enrich the current knowledge of corporate governance.

Previous research on board composition and company performance has used a number of different methods to study the research problem. Adams, Hermalin and Weisback (2010) use a literature survey on corporate boards, while Douglas, McNulty and Zattoni (2013) use a qualitative method. However, there have been relatively few published qualitative research papers examining the relationship between board composition and firm financial performance.
Much research has used a quantitative approach to discover the relationship between board independence and firm performance (Agrawal & Knoeber, 1996; Baysinger & Butler, 1985; Bhagat & Black, 1999, 2002; Brown et al., 2011; Chen, Lin, & Yi, 2008; Choi, Park, & Yoo, 2007). This method focuses on the structural and compositional differences across boards that are presumed to be correlated with differences in behavior (Adams, Hermalin, & Weisbach, 2010). This research adopts the quantitative method of studying a board’s independence and a firm’s performance. Research data is generally collected through structured research questions. This research is based on aggregated and published data. It needs no access to the directors or the boards. It is statistically rigorous and has direct insight into board independence and firm performance. More importantly, it is free from personal judgment and bias.

This research is consistent with the quantitative approach of Bhagat and Black (2002) to statistically and directly investigate the posited relationship between board independence and firm financial performance in the case of H-share companies. Unlike Bhagat and Black (2002) in their “Board independence and long-term performance”, the researchers proxy board independence by the proportion of independent directors, minus the proportion of inside directors. This research uses the percentage of independent directors (INED) to directly represent board independence. In consequence, the methodology used to study this issue is based on quantitative variables. Aside from the proportion of independent directors, Agrawal and Knoeber (1996) state that several other board compositional factors are likely to influence firm financial performance. This research includes CEO duality, director age, board size and gender diversity as the independent variables used in the correlation and regression analysis to answer the research questions. These data are regressed against ROE, Tobin’s Q and price-to-book ratio (P/B ratio) to see whether a relationship exists.

In prior studies of firm performance, Tobin’s Q has been used as the important indicator. Hermalin and Weisbach (1991) point out that the Tobin’s Q value includes the value of expected agency cost. Firm performance in this research is measured in terms of return on equity (ROE) and Tobin’s Q, and they will be used as the dependent variables for hypotheses testing. Price-to-book ratio (P/B ratio) is used as another variable of market
value other than Tobin’s Q for testing the correlation between price-to-book value and the board compositional variables. Although both Tobin’s Q and P/B ratio are measurements of the market value of a company, Tobin’s Q is a forward-looking parameter, whilst P/B ratio is a spontaneous data calculated at the time of collecting the data. The purpose of inclusion of P/B ratio is used as a comparison with Tobin’s Q; the use of the outcomes of the P/B ratio is to check and analyze the consistency with the outcomes of Tobin’s Q. Thus, Tobin’s Q is used as the parameter of market value for hypotheses testing in this study.

The higher ROE, the higher the returns to shareholders per dollar invested in equity. When Tobin’s Q value is greater than one, the market value is greater than the cost to rebuild the company; the higher the stock price, the larger the price-to-book ratio.

All data are in a numerical scale except CEO duality which is in a dichotomous scale. The hypotheses are tested on a sample of 109 cross-listed Chinese companies listed on the Hong Kong Stock Exchange over the period of 2008 to 2010 with the help of ordinary least square (OLS) regressions. In statistics, OLS is a method for estimating the unknown parameters in a linear regression model in order to estimate the “best fit” of a set of independent variables against the dependent variable which to be explained or predicted. Previous studies (Cheung, Connelly, & Limpaphayom, 2007; Kiel & Nicholson, 2003; Pi & Timme, 1993) have adopted the OLS regression for finding the relationship between board composition and firm performance. Using the data described above, the research pools cross-sectional data across time by differentiating between three time periods. For \( t = 2008, 2009 \) and 2010, the total observations is therefore 327 \( (3 \times 109 = 327) \). By including two time period dummies in addition to the intercept, the model allows a separate intercept for each time period. This method provides more observations and more degree of freedom by pooling of cross sectional data from years 2008 to 2010.

With the help of SPSS analyzing software, data collected are analyzed and used to answer the research questions by hypotheses testing for the correlation between board independent variables and firm financial performance. Before conducting the bivariate and multiple
regression analysis, normality tests are conducted. Through hypotheses testing and regression analysis, the research seeks to answer the research questions:

(i) Whether the firm performance is affected by the number of independent directors?
(ii) What is the influence of CEO duality on firm performance?
(iii) Whether there is a significant relationship between director age on the board and firm performance?
(iv) Whether there is a relationship between size of the board and firm performance?
(v) Whether there is significant relationship between the number of woman directors on the board and firm performance?

3.2 Research Process and Research Design

This research pursues a step-by-step, logical and organized method, popularized by Austrian philosopher Karl Popper (1979), to address the research problem. This research follows the hypothetico-deductive method and uses the seven steps systematic approach. After the literature is reviewed and the area of research is confirmed, the research method involves identifying the research problem, defining the problem questions, developing the corresponding hypotheses for the questions, and determining the method of measurement, data collection, data analysis and the interpretation of the data.

3.2.1 Identifying the problem and defining the research questions

Companies incorporated in mainland China that issue and trade their shares in Hong Kong are regarded as H-share companies. Those shares are available to both Hong Kong residents and foreign investors. Most H-share companies are former state-owned enterprises (SOEs) that are in the process of privatization. Such cross-listing of Chinese companies, not only issued and traded on the HKEx, but also on the stock exchanges of London, NASDAQ, New York and Singapore. There are quite a number of delisting cases and Class Actions in
the United States; but very few delisting cases and questionable H-share companies have been found in Hong Kong. Comparing the market capitalization as at the end of 2009 (HKEx, 2009) and as at the end of 2010 (HKEx, 2010), there is an 11.18% increase. The fast growing capitalization has made H-share companies more and more important to the Hong Kong equity market since the first listing in 1992.

As case analyses (like Monks and Minow, 2004) reveal poor corporate governance is the major factor in almost all known corporate scandals and failures. The presence of independent directors and the separation of the CEO and the board chairman has become one of the major issues of international debate after several corporate scandals and the Sarbanes-Oxley Act (2002). Good corporate governance is not just complying with the rules set up by regulators, but is about the board’s performance contributing to the direction of the company and the value to shareholders.

After preliminary information gathering and a literature review, this research examines the question of whether board independence as a requirement of Code of Corporate Governance of Hong Kong assists in regulating the H-share companies. The research problem is defined as “Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?” This problem can only be solved by analyzing the data on real-world boards of directors and to examine whether the phenomena can be predicted using the discussed theories.

3.2.2 Formulating hypotheses for testing

In this step, agency, stewardship and resource dependence theories are employed as the theorized network of associations among the variables (ROE, Tobin’s Q, INED, DUALITY, AGE, SIZE and GENDER). Corresponding and testable hypotheses are then set up.
3.2.3 Determining the measures and data collection

Both the dependent and independent variables are defined and measured by following the quantitative approach in determining the relationship between board independence and firm performance (Agrawal & Knoeber, 1996; Baysinger & Butler, 1985; Bhagat & Black, 1999, 2002; Chen, Lin, & Yi, 2008; Choi, Park, & Yoo, 2007) and to test the corresponding hypotheses.

From a sample of 109 cross-listed Chinese companies on the Hong Kong Stock Exchange over the period of 2008 to 2010, data are obtained from various sources. The information about the percentage of independent directors, CEO duality, board size, individual age of directors on the board and the number of women board member was collected manually from the annual reports and corporate governance reports of the companies listed on HKEx. Tobin’s Q and price-to-book ratio were downloaded from Bloomberg. Return on equity was manually recorded from OneSource.

3.2.4 Data analysis and interpretation of data

SPSS is the statistical analysis software provided by International Business Machines Corporation (IBM), it provides univariate and multivariate modeling techniques to help researchers reach the most accurate conclusions when working with data describing complex relationships. These sophisticated analytical techniques are widely and frequently applied to gain insights from data used in disciplines such as social science, marketing and business research. SPSS provides capabilities including widely used statistical models, such as linear regression for normally distributed responses for data counted, particularly suitable to this research in statistical, correlation and regression analysis on the data collected. Interpretation of the findings will be based on the theoretical framework to conclude implications and recommendations on the issue of corporate governance.
3.2.5 Research design

The research is quantitative, descriptive, bivariate, correlational and regressed analysis based on secondary data. Since secondary data were used, ethics application and approval is not required. The purpose of the research is to find the relationships between board independence and firm financial performance; the study will establish a definitive research problem, that is, “Does a firm’s effects of board independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?” With respect to the theories of agency, stewardship and resource dependence, the study will predict what it is likely to be found from which the hypotheses can follow and which explain the hypotheses. To align the research problem to the method that can answer it, the study formulates and tests the hypotheses established for each research question respectively.

Much of the previous study on the relationship between board independence and firm performance is quantitative (Agrawal & Knoeber, 1996; Baysinger & Butler, 1985; Bhagat & Black, 1999, 2002; Brown et al., 2011; Chen, Lin, & Yi, 2008; Choi, Park, & Yoo, 2007). Tobin’s Q is widely used as a measure of market valuation that proxies for firm financial performance. In this study, the return on equity is another measure of a company’s operating profit that proxies for firm’s profitability. Board independence is proxied by the percentage of independent directors. Having identified and defined the variables of the study and developed the theoretical framework, a hypothesis-testing study will be used to test and analyze the data to arrive at an answer for the research problem.

3.3 Research Gap and Research Questions

The presence of independent directors and the separation of CEO and board chairman are the major issues of international debate on corporate governance. Most of the studies have been done in advanced economies, and yet the empirical results on the relationship of these two issues on firm performance are mixed and inconclusive. The unique ownership
structure of H-share companies, the nature of their business environment (a socialist economy) and their characteristics of cross-listing, makes it informative and meaningful to explore the relationship between internal governance mechanisms such as board attributes and firm performance. The aim of this study is to gain a better understanding on whether there is a relationship between board independence on firm performance for return on equity and Tobin’s Q in terms of: percentage of independent directors; leadership structure in terms of CEO duality; and board composition in terms of board age, board size, and gender diversity. In this regard, the research problem with five research questions is, “Does a firm’s effects of board independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on Hong Kong Stock Exchange?”.

3.4 Significance of the Research

H-share stocks have been traded in Hong Kong since 1992. The TsingTao Brewery became the first Chinese state-owned-enterprise listed in Hong Kong. As at the end of 2010, 144 H-share companies issued and traded on the Main board of the Hong Kong Stock Exchange. The fast speed of development of the H-share equity markets since their establishment in terms of the number of listed H-share companies, the market still have a long way to go in terms of sophistication, and their enormous asset which are governed by boards has attracted more attention towards the issue of corporate governance.

When management is separated from ownership, all companies need governing as well as managing. Prior studies on agency theory discussed the separation of ownership from management given the capitalist and market economies. Agency theory in a socialist market economy of China and the corporate governance practices within Chinese incorporated firms is seen as deficient in their operations. On the contrary, state-owned enterprises listed a minority portion of their outstanding shares in the major international exchanges, including Hong Kong, Singapore, New York, NASDAQ and London AIM markets which are characterized as advanced economies with a higher quality of corporate
governance standards. Inevitably the state government of China retains significant influence in many of these enterprises, even after their privatization. To safeguard the minority shareholders’ interests and rights, board independence is generally supported by most of the regulators and investors in advanced economies.

The issue of the board of directors and corporate governance has long been topical. Board independence, leadership structure and board composition associates with different type of agency problems. H-share companies incorporated in China are doing business on the Mainland, but cross-listed in Hong Kong on the Hong Kong Stock Exchange. They are not regulated by the Company Ordinance of Hong Kong, but they are requested to follow the rules of listing for the Hong Kong Stock of Exchange. Corporate governance becomes extreme important to protect the interests and rights of their shareholders.

The Corporate Governance Code developed by the Hong Kong Stock Exchange (HKEx, 2010) addresses the country’s most salient governance problem referring to the existence of family-owned listed companies. Despite many country differences, codes developed having similar recommendations and a set of best practices to its counterparts, the UK, regarding the behavior and structure of a company’s board of directors are tackling the transparency and accountability of board practices through encouraging the increasing use of independent board members.

The majority owners of the H-share companies are Chinese governmental agencies, such as a state ministry or local government. State-owned and state-controlled enterprises are likely to face various agency problems as H-share companies are doing business on behalf of state interest (Chan, 1996). In this sense, H-share companies are inevitably affected by the political and social preoccupations of the Chinese governments. State ownership concentration results in two groups of shareholders, the majority state-owned shareholders and thousands of minority shareholders. A conflict of interests exists not only between management and ownership, but also between these two groups of shareholders. Controlling shareholders have an opportunity to maximize their own benefit by expropriating at the cost of minority shareholders (Fan & Wong, 2002). It is, therefore, the
H-share companies that have difficulties with separation of government and enterprises to ensure the benefits of every single shareholder.

Given the unique ownership structure of H-share companies and different corporate governance practices, agency conflicts are not only created by the separation of ownership and control as posited by Fama and Jensen (1983), but board of directors, particularly executive directors, may also be obligated to the national interests when their controlling shareholders are the state governments. H-share companies face agency conflicts in the interest between majority and minority shareholders. In addition, H-share companies that are incorporated and are operating their business in mainland China are subject to the company law of China, but also are required to comply with corporate governance standards in the area of board of directors in Hong Kong. Are the corporate governance mechanisms functional enough to protect every single shareholder’s interests? Given the unique ownership structure of H-share companies, this research uses multiple theories to investigate the relationship of board independence, leadership structure and board composition to firm financial performance. The study is going to shed some light by answering the research problem “Does a firm’s effects of board independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on Hong Kong Stock Exchange?”, for future corporate governance research, particularly for the issue of cross-border listing.

3.5 Data Sources and Samples

To implement the empirical study, a dataset is established by collecting and assembling the data from the annual reports and corporate governance reports based on the Chinese firms cross-listed on the Hong Kong Stock Exchange. The sample consists of companies listed on the H-share Main board of the Hong Kong Stock Exchange from years 2008 to 2010. HKEx classifies a firm that their business activities are engaging and incorporated the companies in mainland China as H-share companies, and issued and traded their shares on the Hong Kong Stock Exchange. This study uses the data of H-share companies listed on
the Mainboard of the Hong Kong Stock Exchange from the calendar years 2008 to 2010. There are, in total, 144 Chinese incorporated companies listed on the H-share Main board as at the end of 2010. Twenty-four of them listed after year 2008, four transferred from GEM to the Main board after 2009 and one company was under delisting procedures during the period of 2008 to 2010. Six of the rest have been found data incomplete. Based on the availability of annual reports and financial data, eventually, this study retains all observations that have no missing data (return on equity, Tobin’s Q, price-to-book ratio, percentage of independent director, board age, board size, CEO duality and gender diversity), and results in a balanced panel which consists of 327 firm-year observations (109 firms out of 144 listed companies over 3 years as the sample).

The information for study on H-share companies is obtained from various sources. Information collected manually from annual reports and corporate governance reports are: the number of independent directors, CEO duality, board size, the individual age of directors on the board and the number of women on boards. Information on market-based value, Tobin’s Q and price-to-book ratio for each company was downloaded from Bloomberg. Accounting-based data, return on equity, is manually recorded from OneSource.

### 3.6 Theoretical Framework

In Hong Kong, apart from the CEO and chairman, the boards are composed of executive directors, non-executive directors and independent directors. All directors have a fiduciary duty to shareholders. The board’s ultimate measure of effective stewardship is adding shareholders value by demonstrating on the balance sheet and the market value. Regarding separation of ownership and control, agency theory helps to understand the problems of corporate governance that how to keep managers from diverting corporate assets for private purposes. Stewardship theory views managers as being responsible stewards of the assets they control. Stewardship theorists argue that shareholder interests are maximized by the shared incumbency of these roles (Donaldson & Davis, 1991). The managers are far from
being opportunistic followers; instead, they perceive their interests as aligned with that of their corporation through an expectation of future employment and benefit (Barney, 1990). According to resource dependence theory, directors are expected to serve effectively to link the firm with external resources that help to overcome uncertainty for company survival (Pfeffer & Salancik, 1978). In this empirical study, apart from board independence as the independent variable, four board related factors are considered to affect a firm’s financial performance: CEO duality, board size, director age and gender diversity. Therefore, this study establishes the following conceptual model (Figure 3.1) in terms of agency, stewardship and resource dependence theory for correlational test and regression analysis.

**Figure 3.1 Conceptual model**

In most emerging Asian markets, the interests of outside and minority shareholders is a key concern given the preoccupation of highly concentrated ownership (Claessens, Djankov, & Lang, 2000). Given their unique ownership structure, this is particularly apparent in the case of H-share companies, even the corporate boards of H-share companies are set up based on China company law and the listing rules of the Hong Kong Stock Exchange, the members of upper management are still the representatives of the state government. In this sense, to what extent the top managements of H-share companies are affected by the state government’s obligations to social interests is difficult to answer. Whether this conflict of interests could affect the benefit of other minority shareholders, or this relationships and connections with the state government could bring benefit to the company is inconclusive
and unanswered. Thus, this research employs a multi-theoretical approach to develop hypotheses to relate the variables being tested.

3.7 Instrumentation

The Hong Kong Stock Exchange (HKEx) provides a website that discloses listed companies’ annual reports and corporate governance reports. Information on board’s variables such as the number of independent directors, board size, director age, CEO duality and the number of woman directors is gleaned from those annual reports and corporate governance reports. Tobin’s Q and price-to-book ratio are downloaded from Bloomberg, whilst return on equity is manually recorded from OneSource. Statistical Product and Service Solution (SPSS) is used for descriptive statistics, correlation testing and regression analysis.

3.8 Definition of Dependent Variables

This section clearly defines each of the dependent and independent variables with regards to the research questions for correlation and regression analysis. Hypotheses are developed that correspond to each of the independent variables that relates to each of the dependent variables.

Companies, particularly publicly listed companies, have to live with financial constraints and deliver perceived value for money to their shareholders. To measure a firm performance, accounting measures of financial performance have been the widely accepted quantitative approach. However, there is no single ideal measure of long term performance (Bhagat & Black, 2002), and there is overlap between different accounting-based measures. Demsetz and Villalonga (2001) use both accounting-based measures (return on asset) and market-based measures (Tobin’s Q) in the measurement of firm financial performance. This study utilizes data for three measures of firm performance, each with support in accounting and financial literature. For the accounting-based measure, return on equity is used to
measure company’s current profitability and operating efficiency. Regarding the future value creation, Tobin’s Q is used as a forward-looking and market-based measure. Price-to-book ratio is used as another market-based measure for the current market value of the H-share companies.

3.8.1 Return on equity (ROE)

One of the most popular measure of financial performance is return on equity which measures a corporation's profitability for a period by revealing how much profit a company generates with the money shareholders have invested. It provides an accounting measure of the returns to shareholders’ investment. Instead of measuring the return on each dollar invested in assets which including both capital from shareholders and that from creditors, return on equity considers only equity capital. It is reasonably similar and comparable across companies. In this regard, this study adopts return on equity as the accounting-based measure of financial performance.

Return on equity is calculated by 12-month net income (losses) divided by the average of total common equity. A company with higher return on equity has superior firm performance compared to those with a lower return on equity. In this study, by using data sources from Reuters (OneSource), the return on equity is calculated as the return on average equity and refers to net income divided by the average of the beginning and closing balance of equity:

\[
\text{Return on Equity} = \frac{\text{Net Income}}{\text{Average Shareholder's Equity}}
\]

3.8.2 Tobin’s Q

Bhagat and Black (2002) collect Tobin’s Q, return on asset and market adjusted stock price return as the financial measures of firm performance. However, stock price return is susceptible to investor anticipation, so they rely largely on Tobin’s Q. Researchers in the
area of corporate governance like Hermalin and Weisbach (1991) and Cho (1998) use Tobin’s Q as the preferred measure of firm financial performance. Accounting-based measures are subject to accounting standards that do not account for market value. Most of them are backward-looking figures instead of a predictor for future value. Recent financial scandals, like Enron and WorldCom, have highlighted the possibilities for financial accounting reports to mislead the public whilst following and complying GAAP. In contrast, Tobin’s Q is the ratio of the market value of a firm’s asset to the replacement cost of the firm’s asset (Tobin, 1969). It is one of the most extensively used and recognized measures of firm performance in accessing the relationship between a corporate governance practices and firm value (Doidge, Karolyi, & Stulz, 2004). If a firm is worth more than its value based on what it would cost to rebuild it, then excess profits are being earned. Hermalin and Weisbach (1991) mention that a Tobin’s Q rating of above one indicates that the market views the firm’s internal organization as being exceptionally good or the expected agency costs as being particularly small. These profits are above and beyond the level that is necessary to keep the firm in the industry. The disadvantage, to a certain extent, is that it is also related to the investor’s psychology and may be biased at the time because of the economic environment. As mentioned before, there is no single ideal measure of long-term performance (Bhagat & Black, 2002).

Consistent with previous studies, this study uses Tobin’s Q as the market-based measure by which firm performance and shareholders wealth are related to director independence, CEO duality and board composition. It is the market value of a company proportionate to the replacement cost of the company’s assets. It is based on the assumption that in the long run the market value of a company should be roughly equal to the cost of replacing the company’s assets. In this study, data was collected from Bloomberg who calculates Tobin’s Q as:

\[
\text{Tobin’s Q} = \frac{\text{Market Capitalization} + \text{Liabilities} + \text{Preferred Liabilities} + \text{Minority Interest}}{\text{Total Assets}}
\]
3.8.3 Price-To-Book ratio (P/B ratio)

Price-to-book is the ratio of the stock price to the book value per share. It is calculated by dividing the stock price of the company by the latest book value per share. Both stock price and book value are taken from the most recently used annual report in the calculation. A lower price-to-book ratio could generally mean that the stock is underpriced, but this varies across industries and it does not include intangible assets. As a market-based measure, price-to-book ratio is used for testing the correlations with INED, CEO duality, board age, board size and gender diversity to check with the results of Tobin’s Q and sees whether there is consistency. Tobin’s Q is used for hypotheses testing since it is a forward-looking parameter, whilst price-to-book ratio is a ratio calculated from spontaneous data at the time of collection. This research does not use price-to-book ratio as one of the firm performance variables for hypothesis testing because there is a price discount for H-share companies relative to their A-shares listed in the mainland China. In this sense, price-to-book ratio is subject to the effects of the performance of A-shares. Wang and Jiang (2004) document that the prices of H-share discount relative to A-shares performance during the time of 1994 to 2000 because of ownership restrictions and market liquidity. The price-to-book ratio was collected from Bloomberg who calculates the P/B ratio as:

\[
\text{Price-To-Book ratio} = \frac{\text{Stock price at the end of the year}}{\text{the latest book value per share of the year}}
\]

3.9 Independent Variables and Hypotheses

This section clearly elaborates the definitions of every single independent variable (INED, DUALITY, AGE, SIZE and GENDER) in this study with regards to the research hypotheses and regression analysis. All data of the independent variables are collected at the end of the year; both return on equity and Tobin’s Q are also calculated at year’s end.
The research problem of this study is, “Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies that cross-list their shares on the Hong Kong Stock Exchange?” Research question 1 is, “Does the percentage of independent directors affect firm performance?” Research question 2 is, “Should the CEO also be the chairman of the board?” Research question 3 is, “Does board age have an impact on firm performance?” Research question 4 is, “Does board size affect firm performance?” Research question 5 is, “Does gender diversity affect firm performance?”

Apart from the number of independent directors and the CEO duality, which are generally used as measures of board independence for good corporate governance, this study includes other measures of board composition in the correlation and regression analysis. Based on the research problem and research questions, hypotheses are established for each of the independent variables (INED, DUALITY, AGE, SIZE and GENDER) respectively on return on equity and Tobin’s Q.

**3.9.1 Percentage of independent directors (INEDs)**

An independent board is highly regarded by many as one of the most important corporate governance mechanisms for reducing the agency problems and agency costs that are created by the separation of ownership and control, particularly in the protection of the interests and rights of every single shareholder.

In the U.S. and the U.K., it is preferable to have a corporate board; the majority is independent directors as well as a separation of responsibilities by the CEO and the board chairman. These two issues have been the current controversy and international debate on corporate governance. Most of the research has been done for developed countries, yet the empirical results on the relationships of these two issues on firm performance are mixed.
The first research question “Does the percentage of independent directors affect firm performance?” addresses whether a higher percentage of independent directors on the boards of H-share companies, proxied by the percentage of independent directors, is associated with superior firm performance. INED measures the fraction of independent directors. It is the ratio of the number of independent directors to the total number of board members. Independent directors are not members of the executive management team, and are not employees or affiliated with the company in any way. Independent directors are the custodians of the governance process not involved in the operations of business, but who monitor the executive activities. In that sense, a higher proportion of independent directors represents higher board independence.

The listing rules and requirements of the HKEx recommend that INEDs should have no past and present financial or other material interest in the company or its affiliates which might affect the exercise of independent judgments and decisions. Ho and Wong (2001) find that the average proportion of INEDs of publicly listed firms in Hong Kong on average was 34%. It is therefore perceived as proportionally small compared with the US and the UK. However, the quality of INEDs is as important as its quantity in ensuring better governance. This research follows the code of corporate governance of Hong Kong, effective 30 September 2004, which requires every listed company on the Hong Kong Main Board to ensure that at least one-third of the board members are independent directors and to disclose the composition of the board, by category of directors in the corporate governance report. This study measures the level of board independence, in which a higher percentage of independent directors represents higher board independence.

In prior studies, Fama and Jensen (1983) advocate the importance of board independence to provide effective monitoring of managerial activities. Choi, Park and Yoo (2007) find evidence of a positive relationship between board independence and superior firm performance, particularly in post-crisis emerging markets subject to economic instability and external financial shocks. Rebeiz (2008) finds that boards comprising more independent directors positively impact on the financial performance of firm.
Dahya and McConnell (2007) find a statistically significant increase in stock prices, corresponding with announcements of the addition of outside directors in conformity with the recommendations of the Cadbury Report. In this study, we extend the prior empirical research in the emerging markets by evaluating whether there is a positive relationship between director independence and firm financial performance and to see whether this is valid in the case of Chinese H-share companies which operate in a different institutional environment of mainland China but requires to follow the listing rules and requirements of the Hong Kong Stock Exchange.

Shareholders play a relatively minor role in the governance of companies, such that the management of the modern corporation is almost reserved for the directors of the company. The modest role that shareholders have at present in the governance of companies is to promote board independence when the separation of control and ownership is a natural and inevitable consequence of increasingly diverse ownership.

An implication of agency theory is that independent directors could protect shareholder interests and rights, which in turn could reduce agency cost. Resource dependence and stewardship theories both support outside board members whose provide advice, on the one hand, and help to build external networks to access scarce resources, on the other. Thus, this empirical study set up the first set hypotheses that there is a positive relationship between the percentage of independent directors and firm performance to address the first research question, “Does the percentage of independent directors affect firm performance?” This leads to the following hypotheses:

H1: The percentage of independent directors correlates positively to return on equity.
H1-1: The percentage of independent directors correlates positively to Tobin’s Q.
3.9.2 CEO Duality (DUALITY)

It is the responsibility of the CEO to operate the company in an effective and ethical manner (NYSE, 2003). Most US corporations are characterized by the dual CEO board structure in which the CEO also serves as chairman of the board. This leadership structure is recognized as giving the CEO greater control at the expenses of other parties (Rechner & Dalton, 1991). Some companies have found it useful to separate the role of CEO and chairman of the board to provide continuity of leadership and balance of power. Each company should make its own determination of what leadership structure works best. The second research question then is, “Should the CEO also be chairman of the board?”

Many commentators of corporate governance have called for a prohibition on the CEO serving as chairman (Jensen, 1993). A recent empirical study by Chen, Lin and Yi (2008) show no significant relationship between CEO duality and firm performance by analyzing the data from S&P 1500 index which comprises 400 mid cap and 600 small cap companies. Their study focuses largely on the relationship between CEO duality and Tobin’s Q. This study coded a CEO duality when the chairman/president and CEO is the same person. The board structure is coded as independent chair if the board chairman is not also the CEO. This variable is a binary code that CEO duality is one and independent chair is zero. In this study, one is assigned when the Chairman and CEO bear the same name in the annual report to set up a dichotomy for this variable.

Although stewardship theory argues that managers act as responsible stewards of the company assets they control. Stewardship theorists assert that CEO duality could reduce ambiguity regarding responsibility and decision making created when CEO and chairman are not the same person. An implication of agency theory is that where CEO duality is retained, shareholder interests and rights could not be protected by interest divergence of the CEO and shareholders. The Codes of Corporate Governance of Hong Kong also recommends that the same person should not hold the CEO and chairman roles simultaneously. In this regard, agency theory yields the second set hypotheses regarding CEO governance that “CEO duality correlates negatively with company financial
performance” in order to test whether there is a negative relationship between CEO duality and company financial performance.

Research question 2, “Should the CEO also be the chairman of the board?” leads to the following hypotheses of:
H2: CEO duality correlates negatively to return on equity.
H2-1: CEO duality correlates negatively to Tobin’s Q.

In addition to the percentage of independent directors and CEO duality on a board, both are valued as major factors for board independence. Argrawal and Knoeber (1996), and Bhagat and Black (2002) suggest that other variables for board composition are likely to have an impact on firm financial performance. This study includes board age, board size and gender diversity to find their relationship with firm performance and their effect in the regression analysis.

3.9.3 Director Age (AGE)

AGE is the explanatory variable representing the average age of the firm’s directors. It is measured by adding up the age of all directors on a board, then taking the average. Older board members have more experience that may improve the efficiency of the company’s operations and decisions, but they are also reluctant to make risky decisions (Vroom & Pahl, 1971). Consistent with this, Bonn, Yoshikawa and Phan (2004) assert that board age is inversely related to market value on a small sample of Japanese companies. Child (1974) points out that older manager have lesser ability to carry out innovative strategies. In addition, Fukui and Ushijima (2007) and Adams and Ferreira (2009) find that director age is negatively correlated to both firm’s operating profitability (return on asset) and its market value (Tobin’s Q). In this sense, the findings support the theory that boards becomes less effective as the average age of their board members rises. Although some of this research shows that director age has a negative impact on firm performance, these have been researched in Western countries based on the theoretical framework of agency theory.
Regarding a resource dependence perspective, directors benefit the companies depending upon whether they are able to access valued resources and information, and reduce external uncertainty (Daily & Dalton, 1994).

Is there a correlation between average age of board members and return on equity and Tobin’s Q in H-share companies? This empirical study then establishes the third question, “Does board age have an impact on firm performance?” In order to test the question, this research set up the third set of hypotheses (H3 and H3-1) that the director age is negatively correlated to firm performance based on the agency view of prediction and explanations. For the opposite view of the resource dependence and stewardship theory, another set of hypotheses (H3-2 and H3-3) are established to test whether there is a significantly positive correlation between board age and company financial performance of H-share companies.

Research question 3 “Does board age have an impact on firm performance?” leads to the following hypotheses:
H3: Average director age of a board correlates negatively to return on equity.
H3-1: Average director age of a board correlates negatively to Tobin’s Q.
H3-2: Average director age of a board correlates positively to return on equity.
H3-3: Average director age of a board correlates positively to Tobin’s Q.

### 3.9.4 Board Size (SIZE)

SIZE refers to the number of members on the board as disclosed in the corporate governance reports of H-share companies on the Hong Kong Stock Exchange. The data of SIZE was collected manually for each accounting year, from years 2008 to 2010, by adding up the number of CEO/president, executive, non-executive and independent directors from the annual reports and corporate governance reports of the sampled firms. This classification is similar to the categorization of board directors used by the Code of corporate governance of Hong Kong (HKEx, 2004).
The listing rules of the Hong Kong Stock Exchange (HKEx, 2004) has no requirement for the size of a board for the H-share companies. There are advantages and disadvantages for both smaller and larger boards. Smaller boards tend to be more focused and involved. However, smaller boards are easily controlled by a dominant personality. A big board exists in some successful companies such as GE and Wal-Mart, but also along with some badly performing companies like US Airways and AT&T. At the same time, small boards exist at well performing companies like Berkshire Hathaway and Microsoft and some not-so-well performing companies such as Trump. When boards become larger, the talent pool becomes wider and deeper, but it is not easy to keep a larger number of people from different walks of life involved and working together efficiently. What is the typical size of a board for H-share companies? Does board size affect company performance? The fourth research question is then, “Does board size affect firm performance?”

Previous studies regarding board composition by Yermack (1996), Eisenberg et al. (1998) and Mak and Kusnadi (2005) assert that larger boards relate to lower performance. Lipton and Lorsh (1992) suggest that larger boards are less cohesive, thus reducing management efficiency and lowering the firm performance. Evidence based on US corporations suggests that large boards restrain risk taking (Cheng, 2008). An implication that agency problems increase when boards consist of more directors is due to the fact that the larger a board is, the greater the possibility to create a free-rider director. The problem of coordination is larger than the advantages of having more directors on a board (Jensen, 1993). However, these researches have been done in Western countries based on the theoretical framework of agency theory. Regarding resource dependence theory, Pfeffer (1972) documents that company board size is an organizational response to the conditions of the external environment. Directors benefit the companies depending upon whether they are able to access valued resources and information, and reduce external uncertainty (Daily & Dalton, 1994). One director may have strengths in some areas and weaknesses in others, another may possess complementary qualities. Therefore, this empirical study will extend the research of Jensen (1993) to establish the fourth set of hypotheses (H4 and H4-1) that board size negatively correlates to company performance based on agency theory’s predictions, to test whether there is a meaningful correlation between board size and
company financial performance. On the other hand, another set of hypotheses (H4-2 and H4-3) are set up to test the positive relationship based on the resource dependenc theory and stewardship theory’s predictions and explanations.

Research question 4 “Does board size affect firm performance?” leads to the following hypotheses:

H4: Board Size correlates negatively to return on equity.
H4-1: Board Size correlates negatively to Tobin’s Q.
H4-2: Board Size correlates positively to return on equity.
H4-3: Board Size correlates positively to Tobin’s Q.

3.9.5 Gender Diversity (GENDER)

A continuing debate concerns whether women on boards have any association with firm performance. In 1998, Enron’s annual report indicated that, of 17 board members, only one on the board was a woman, thus, Enron’s board was not diverse. It seems that Enron’s board typified one of the problems associated with a lack of diversity. Compared with the mean in the United States, female directors on boards held 14.8% of the Fortune 500 in 2007 (Catalyst, 2007), and the female directors on boards in Canada and Australia constituted 10.6 and 8.7% respectively in 2006 (EOWA, 2006). However, there were less than 1% of female board members in Japan in 2006. The presence of female directors have often been regarded as tokenism (Branson, 2006). In some companies, such as Bulgari, Crocs, Fiat, Toyota and Zale, these globally recognized brands market to women, but have no woman on their boards of directors. This deep rooted value is likely to change when many proposals for governance reform stress the importance of gender diversity in the boards. Higgs (2003) suggests that gender diversity is capable of enhancing board effectiveness. Tyson (2003) recommends firms draw more actively from professional boards in which women are better represented. The most extreme case is Norway which requests that all listed companies have not less than 40% representation of female board members from January 2008.
While governance commentators are proposing to reform gender diversity, Adams and Ferreira (2009) find a negative relationship between gender diversity and firm performance, although gender diversity allocates more effort to monitoring. The controversy is mixed and inconclusive. The fifth research question is then, “Does gender diversity affect firm performance?” This study extends the research of Adams and Ferreira (2009) on gender diversity and firm performance. Gender diversity is expected to be the variable inversely correlated to firm financial performance. Thus, this research studies a fifth hypothesis that gender diversity is negatively correlated to firm financial performance in order to test whether there is a significantly negative correlation between gender diversity and company performance of H-share companies.

Research question 5 “Does gender diversity affect firm performance?” leads to the following hypotheses:
H5: Gender diversity correlates negatively to return on equity.
H5-1: Gender diversity correlates negatively to Tobin’s Q.

**3.9.6 Dummy variables of 2009 (YD09) and 2010 (YD10)**

YD09 takes a value of 1 if the year is 2009 and zero otherwise. YD10 takes a value of 1 if the year is 2010 and zero otherwise. By including two time period dummies in addition to the intercept, the model allows a separate intercept for each time period.
3.9.7 Summary of the variables

Table 3.1 Summary of the variables used

<table>
<thead>
<tr>
<th>Variables</th>
<th>Symbol</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on equity</td>
<td>ROE</td>
<td>Net income divided by the average of beginning and closing balance of equity</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>Tobin’s Q</td>
<td>Q = (Market Capitalization + Liabilities + Preferred Liabilities + Minority Interest) / Total Asset</td>
</tr>
<tr>
<td>Price-to-book ratio</td>
<td>P/B ratio</td>
<td>Price-To-Book ratio = Stock price at the end of the year/ the latest Book value per share of the year</td>
</tr>
<tr>
<td>Independent Director</td>
<td>INED</td>
<td>The ratio of the number of independent directors to the total number of board members in percentage</td>
</tr>
<tr>
<td>CEO Duality</td>
<td>DUALITY</td>
<td>A dummy variable which is equal to one when the chairman and CEO is the same person, otherwise it is zero</td>
</tr>
<tr>
<td>Board Size</td>
<td>SIZE</td>
<td>The total number of members on the board</td>
</tr>
<tr>
<td>Director Age</td>
<td>AGE</td>
<td>The average of the total age of all directors on board</td>
</tr>
<tr>
<td>Gender Diversity</td>
<td>GENDER</td>
<td>The fraction of woman directors to the total number of board members</td>
</tr>
<tr>
<td>Year Dummy (2009)</td>
<td>YD09</td>
<td>A dummy variable that takes a value of 1 for the year 2009 and zero otherwise.</td>
</tr>
<tr>
<td>Year Dummy (2010)</td>
<td>YD10</td>
<td>A dummy variable that takes a value of 1 for the year 2010 and zero otherwise.</td>
</tr>
</tbody>
</table>

3.10 Correlation Test for Hypotheses

Parametric Correlation is used to explore the association between firm performance and board variables by SPSS to find out the corresponding Pearson’s coefficient (r-value) and significant value (p-value). The Correlation analysis is used to determine the existence of a linear relationship and its strength and direction, either positive or negative between the
dependent variables and independent variables. The significant level assigned in the
correlation test is conventionally set at p=0.05. One independent variable (INED, Duality,
AGE, SIZE and GENDER) is hypothesized to affect one dependent variable (return on
equity, Tobin’s Q and price-to-book ratio)

3.11 Regression Model

Research by Agrawal and Knoeber (1996) shows that regression models are developed
where firm financial performance is measured by both market-based and accounting-based
data, and is regressed according to the percentage of independent directors on the board,
CEO duality and board composition. Regression analysis is one of the most widely used
statistical techniques. Today, it is applied in social sciences, economics, marketing, and
many other areas of academic. The purpose of linear multiple regression (the term was first
used by Pearson, 1908) is to learn more about the relationship between several independent
or predictor variables and a dependent or criterion variable. It is a statistical technique for
determining what proportion of the variance of a continuous, preferably normally
distributed, variable is associated with, or explained by, two or more other variables, taking
into account the associations between those other variables. For this study, it is going to
ascertain what variables are associated with firm financial performance in H-share
companies. It is likely the percentage of independent directors, CEO duality, director age,
board size and gender diversity are related to firm financial performance. Linear multiple
regression helps to determine what proportion of the variance in H-share companies’
financial performance is explained by these board attributes.

Linear multiple regression analysis is applied where INED, DUALITY, AGE, SIZE and
GENDER are used to explain variance on ROE, Tobin’s Q and price-to-book ratio. The
ordinary least squares method is used to estimate the regression coefficients of each of the
independent variables. As a pooled cross sectional data structure, there is, in total, 327 firm-
year observations from 109 firms for building a pooled model dataset. All data are pooled
and run by using ordinary least squares regression. In order to control the data for year
differences, the models use year dummy variables as a measure of differences in intercepts for each year. This regression generates three basic equations:

A regression model (1) is an equation of cross-sectional linear regression with return on equity as the dependent variable, and board attributes as the independent variables.

Return on Equity = β1 + β2 \(\text{INED}\) + β3 \(\text{DUALITY}\) + β4 \(\text{AGE}\) + β5 \(\text{SIZE}\) +
β6 \(\text{GENDER}\) + β7 \(\text{YD09}\) + β8 \(\text{YD10}\) + ε1

Where β1 is the intercept of the regression model (1), the coefficient of β2, β3, β4, β5, β6, β7 and β8 tell us how much return on equity will change for a unit increase in the corresponding variables, for a given value of all the other predictor variables in the equation and ε1 is the random error of the regression model (1). The coefficients of each independent variable represent the partial effect of the dependent variable.

Regression model (2) is an equation of cross-sectional linear regression with Tobin’s Q as the dependent variable, and board attributes as the independent variables

Tobin’s Q = α1 + α2 \(\text{INED}\) + α3 \(\text{DUALITY}\) + α4 \(\text{AGE}\) + α5 \(\text{SIZE}\)
+ α6 \(\text{GENDER}\) + α7 \(\text{YD09}\) + α8 \(\text{YD10}\) + ε2

Where α1 is the intercept regression model (2), the coefficient of α2, α3, α4, α5, α6, α7 and α8 tell us how much Tobin’s Q value will change for a unit increase in the corresponding variables, for a given value of all the other predictor variables in the equation and ε2 is the random error of the regression model (2).

Regression model (3) is an equation of cross-sectional linear regression on price-to-book ratio as the dependent variable and board attributes as the independent variables

Price-to-book ratio = μ1 + μ2 \(\text{INED}\) + μ3 \(\text{DUALITY}\) + μ4 \(\text{AGE}\) + μ5 \(\text{SIZE}\)
+ μ6 \(\text{GENDER}\) +μ7 \(\text{YD09}\) + μ8 \(\text{YD10}\) + ε3
Where $\mu_1$ is the intercept regression model (3), the coefficient of $\mu_2, \mu_3, \mu_4, \mu_5, \mu_6, \mu_7$ and $\mu_8$ tell us how much Tobin’s Q value will change for a unit increase in the corresponding variables, for a given value of all the other predictor variables in the equation and $\varepsilon_3$ is the random error of the regression model (3).

In addition, linearity assumption is checked by the scatterplot for predictor variables, and independence assumption will be checked by the residue plot where the residues must be randomly scattered. Normality assumption is checked by the normal probability plot (p-p plot) to see whether it is straight or close to straight.

### 3.12 Conclusion

This chapter covers a discussion of the possible research methods, research process and the research method employed for this study. The research problem was discussed with the research questions and corresponding hypotheses being presented. Definitions of all tested variables are discussed and proposed. Since secondary data is collected from annual reports and corporate governance reports of the H-share companies posted on the HKEx, Bloomberg and OneSource, ethics application and approval is not required. Chapter four will discuss the data analyses that are exhibited in descriptive, correlation and regression analyses. Chapter five will discuss the findings of the research with implication, contributions, limitations, recommendations and conclusions.
Chapter Four: Data Analysis

This chapter discusses the data analysis and empirical findings of this research. The first section exhibits the descriptive statistics for 109 H-share companies in Hong Kong by year from 2008 to 2010 and 327 firm-year observations. The second section describes the correlations of return on equity, Tobin’s Q and price-to-book ratio (P/B ratio) among the independent variables INED, CEO duality, board age, board size and gender diversity, and discusses the results of hypotheses testing. The third section discusses the results of regression analysis. The final section concludes with the results of the findings.

4.1 Descriptive Statistics

This section shows the descriptive statistics of the sample year by year from 2008 to 2010. Table 4.1 presents descriptive statistics for 109 H-share companies in Hong Kong by year from 2008 to 2010. Table 4.2 presents descriptive statistics for the pool of 327 firm-year observations.
Table 4.1 Descriptive statistics of performances and board composition variables by year (2008 - 2010)

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
<th>Statistic</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Range</th>
<th>Standard Deviation</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>7.203</td>
<td>-102.51</td>
<td>33.25</td>
<td>135.76</td>
<td>16.343</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>13.585</td>
<td>-16.12</td>
<td>80.54</td>
<td>96.66</td>
<td>11.096</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>1.107</td>
<td>0.376</td>
<td>2.946</td>
<td>2.570</td>
<td>0.398</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>109</td>
<td>N</td>
<td>1.577</td>
<td>0.658</td>
<td>5.856</td>
<td>5.198</td>
<td>0.855</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>1.516</td>
<td>0.529</td>
<td>4.376</td>
<td>3.848</td>
<td>0.724</td>
</tr>
<tr>
<td>Price-to-book ratio</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>1.205</td>
<td>0.153</td>
<td>7.031</td>
<td>6.878</td>
<td>0.968</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>109</td>
<td>N</td>
<td>2.036</td>
<td>0.398</td>
<td>9.908</td>
<td>9.51</td>
<td>1.551</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>2.082</td>
<td>0.398</td>
<td>14.643</td>
<td>14.245</td>
<td>1.837</td>
</tr>
<tr>
<td>INED</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>0.363</td>
<td>0.17</td>
<td>0.625</td>
<td>0.455</td>
<td>0.088</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>109</td>
<td>N</td>
<td>0.363</td>
<td>0.17</td>
<td>0.71</td>
<td>0.54</td>
<td>0.087</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>0.366</td>
<td>0.18</td>
<td>0.57</td>
<td>0.39</td>
<td>0.085</td>
</tr>
<tr>
<td>Duality</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>0.24</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.428</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>109</td>
<td>N</td>
<td>0.22</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.416</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>0.22</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.416</td>
</tr>
<tr>
<td>AGE</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>52.455</td>
<td>42</td>
<td>60.38</td>
<td>18.38</td>
<td>3.614</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>109</td>
<td>N</td>
<td>53.021</td>
<td>41.33</td>
<td>62.14</td>
<td>20.81</td>
<td>3.905</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>53.325</td>
<td>44.8</td>
<td>60.9</td>
<td>16.1</td>
<td>3.762</td>
</tr>
<tr>
<td>SIZE</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>11</td>
<td>6</td>
<td>19</td>
<td>13</td>
<td>2.735</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>109</td>
<td>N</td>
<td>10.94</td>
<td>6</td>
<td>19</td>
<td>13</td>
<td>2.766</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>10.90</td>
<td>6</td>
<td>19</td>
<td>13</td>
<td>2.691</td>
</tr>
<tr>
<td>Gender</td>
<td>2008</td>
<td>109</td>
<td>N</td>
<td>0.076</td>
<td>0</td>
<td>0.455</td>
<td>0.455</td>
<td>0.085</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>109</td>
<td>N</td>
<td>0.081</td>
<td>0</td>
<td>0.455</td>
<td>0.455</td>
<td>0.095</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>109</td>
<td>N</td>
<td>0.0896</td>
<td>0</td>
<td>0.455</td>
<td>0.455</td>
<td>0.102</td>
</tr>
</tbody>
</table>
From the dataset of 109 H-share companies, the descriptive statistics were generated by SPSS (see Table 4.1). The table shows the mean, minimum, maximum, range, standard deviation and the skewness for the variables used in this study year by year from 2008 to 2010 for 109 H-share companies. The mean, or the arithmetic mean, is used as the measure of central tendency of a variable. It is the sum of a variable divided by the quantity of the variable. As shown in Table 4.1, the arithmetic mean of return on equity increased 88% over the time, rising from 7.2% in 2008 to 13.59% in 2010. From years 2008 to 2010, H-share companies generated more than 7% profit with the money shareholders invested. In general, the H-share companies operated at a profit from years 2008 to 2010 in terms of the accounting-based measure, even after the US financial crisis. However, in 2008, the variation was largest at a standard deviation of 16.34%, but it was clustered closely to the mean with a range from the minimum -102.51% and to the maximum 135.76%.

The means of the Tobin’s Q were 1.11, 1.58 and 1.52 for the years 2008, 2009 and 2010 respectively. Since the Tobin’s Q values were greater than one, the H-share companies were worth more than their value based on what it would cost to rebuild them. The market viewed the firm’s internal organization as having been good and the expected agency costs as having been small. The range in 2009 was 5.20 with a minimum of 0.66 and a maximum of 5.86 and a standard deviation of 0.86. The variation and spread of the observations was largest in 2009.

Another market-based measure of firm performance, the means of the price-to-book ratio were 1.21, 2.04 and 2.08 for years 2008, 2009 and 2010 respectively. The price-to-book ratio increased year on year at 36% on average. Investors paid more than the book value of the H-share companies in general.

In terms of board attributes, the mean of the percentage of independent directors rose from 36.3% in 2008 to 36.6% in 2010. The slight increase shows that H-share companies were raising the level of board independence progressively, but independent directors were still the minority on the boards of H-share companies. The results show that H-share companies complied with the requirements and rules of the Main Board listed company on the HKEx.
that to have a minimum number of three independent directors (INEDs) or one-third of the board.

Another interesting finding is that the minority of H-share companies had their CEO was also the board chairman. CEO duality decreased from 24% in 2008 to 22% in 2010. This percentage was comparatively and significantly lower than that of the US and the UK.

The average director age of H-share companies increased from 52.45 in 2008 to 53.33 in 2010. The average director age showed a slight increase, but it was lower than the average director age of Japan which was around 58, and 58.9 for directors of the US as recorded by Adams and Ferreira (2009). In 2010, the range was 20.81, with a minimum of 44.8 and a maximum of 60.9. The variation was small with a standard deviation of 3.76.

The board size ranged from 6 members to 19 members. There was almost no change in the mean and the variation. The average size of the board decreased from 11 in 2008 to 10.90 in 2010. This complied with the company law of China mandating that a board of directors should consist of 5 to 19 directors. The board size of H-share companies is regarded as small in contrast with the boards of the US and British firms which are generally formed with a mean size of 12 or 13 (Bhagat & Black, 2002), and Japanese firms of 28 directors on a board for large publicly listed companies (Bonn, Yoshikawa, & Phan, 2004). Generally, the board size of H-share companies is smaller than other countries to prevent any difficulty the CEO might have in terms of control, but still larger than an efficient performing board with a number of 7 or 8 recommended by Lipton and Lorsh (1992).

The percentage of woman directors on a board ranged from 0% to 46%, and increased from 7.56% in 2008 to 8.96% in 2010. It was close to 8.7% in Australia, but lower than that of Canada and United States which had women on boards at level of 10.6% and 14.8% respectively (Catalyst, 2007; EOWA, 2006).
Table 4.2 Descriptive statistics of performances and board composition variables for 327 firm-year observations

<table>
<thead>
<tr>
<th>N Statistic</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Range</th>
<th>Standard deviation</th>
<th>Skewness</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>327</td>
<td>9.6881</td>
<td>-102.51</td>
<td>80.54</td>
<td>14.36</td>
<td>-2.674</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>327</td>
<td>1.3999</td>
<td>0.3758</td>
<td>5.856</td>
<td>0.7156</td>
<td>2.44</td>
</tr>
<tr>
<td>P/B ratio</td>
<td>327</td>
<td>1.7742</td>
<td>0.153</td>
<td>14.64</td>
<td>1.5456</td>
<td>3.278</td>
</tr>
<tr>
<td>INED</td>
<td>327</td>
<td>0.3639</td>
<td>0.17</td>
<td>0.71</td>
<td>0.0861</td>
<td>0.769</td>
</tr>
<tr>
<td>DUALITY</td>
<td>327</td>
<td>0.23</td>
<td>0</td>
<td>1</td>
<td>0.419</td>
<td>1.314</td>
</tr>
<tr>
<td>AGE</td>
<td>327</td>
<td>52.933</td>
<td>41.33</td>
<td>62.14</td>
<td>20.81</td>
<td>3.768</td>
</tr>
<tr>
<td>SIZE</td>
<td>327</td>
<td>10.94</td>
<td>6</td>
<td>19</td>
<td>13</td>
<td>2.723</td>
</tr>
<tr>
<td>GENDER</td>
<td>327</td>
<td>0.0822</td>
<td>0</td>
<td>0.4545</td>
<td>0.0941</td>
<td>1.439</td>
</tr>
</tbody>
</table>

Table 4.2 shows the mean, minimum, maximum, range, standard deviation and the skewness for the variables used in this study for 327 firm-year observations. The arithmetic mean of ROE is 9.69% (N=327, SD=14.36). On average, H-share companies generated a 9.69% profit with the money shareholders had invested. Tobin’s Q is 1.40, means that H-share companies were worth more than their value based on what it would cost to rebuild them, and the market viewed the firm’s internal organization as being generally good, and the expected agency costs as being particularly small. In addition, price-to-book ratio (market-to-book) has a mean of 1.77 by which investors paid an average market price that was 77% more than the book value.

The mean percentage of independent directors is 36.39%. In contrast, it is much lower than the mean of 56.7% that reported by Faley (2007) on a sample of 2166 US firms. Obviously, the boards of directors of Chinese firm listed on the HKEx were dominated by inside directors, but complied with the requirement of the listing rules of the Hong Kong Main Board. Though the minimum and maximum percentage of independent directors is 17% and 71%, the spread is small and is clustered closely around the mean at a standard deviation of 0.0861. Although the mean percentage of independent directors of H-share
companies is less than the US and British firms, Agrawal and Knoeber (1996) document a positive relationship between independent directors and firm performance when the mean proportion of independent directors is less than 50%. The next section will investigate the result of the correlation test to see whether independent directors add value to a company when they are the minority on a board.

The average age of directors of H-share companies is 52.93 with a minimum of 41.33 and a maximum of 62.14. It is lower than the average director age of Japan which is between 58 and 59, and 58.9 for the US directors recorded by Adams and Ferreira (2009). H-share companies have a younger board than the companies in Western countries. The age diversity on the board is small for H-share companies as their standard deviation is 3.77.

The mean of board size is 10.94 directors with a minimum of 6 and a maximum of 19 directors. The board size of H-share companies is regarded as a small board compared with the US and the UK which have a mean board size of 12 or 13 (Bhagat & Black, 2002), and with the 28 directors on a board for large listed companies in Japan (Bonn, Yoshikawa, & Phan, 2004).

The descriptive mean of the percentage of woman on boards is 8.22% with a standard deviation of 0.0941. This is close to the 8.7% level in Australia. Woman directors have always been regarded as tokenism (Branson, 2006). This deep rooted value is particularly apparent in China, but it is likely to change when many proposals for governance reform stress the importance of gender diversity on boards. Higgs (2003) suggests that gender diversity could enhance board effectiveness. Tyson (2003) recommends firms draw more actively from professional boards in which women are better represented. In the most extreme case, Norway required all listed companies to abide by a 40% female board in January 2008.
4.2 Correlation Analysis

To describe the relation between two numeric variables, two aspects of the relation are investigated in the analysis: one is a description of the ideal underlying form of the relation and the other is a description of the degree to which the values of the variables conform to the ideal form; these two issues are assessed by using regression and correlation analysis respectively.

This section will present the results of correlation analysis and the result of hypotheses testing. In the correlation analysis, the assumption of normality is a prerequisite for the Bivariate analysis. Both Tobin’s Q and price-to-book ratio are significantly and positively skewed, they are not normally distributed. Therefore, a natural logarithmic transformation is applied to compute the data into the natural logarithmic values of Tobin’s Q (LnTobinQ) and price-to-book ratio (LnP/B). Extreme cases (outliers) have considerable impact on the Bivariate analysis and should be deleted or modified to reduce their influences on normality. Making use of the “exclude cases pairwise” function in the SPSS for screening out the data of outliers, the sample sizes of firm-year observations for correlation analysis on return on equity is 297, LnTobinQ is 295 and LnP/B is 327. This study uses the Kolmogorov-Smirnov statistic, with the Lilliefors significance level as the indicators for normality (Chakravarti, Laha, & Roy, 1967). As a result, the significance level of Kolmogorov-Smirnov statistic with Lilliefors is 0.2 (which is greater than the benchmark 0.05) for return on equity and LnP/B, then their normality is assumed. For Tobin’s Q, the significant value is 0.02, which is close to normality.

Data are all collected from related pairs. To examine the relationship between two variables in linear fashion, related pairs were entered into the Bivariate analysis. Correlation is significant at the level when the p-value is less than 0.05 (1-tailed). To interpret the correlation coefficient, the value indicates a range of possible values from -1 to +1 where the sign indicates the direction of the relationship. This research examines the Pearson correlation test statistic (Pearson’s r) and the associated significance value (p-value). When the r-value is positive and the p-value is less than 0.05, this correlation analysis can state
that there is a positive correlation between two variables and the relationship is significant and positive. In this circumstance, the research hypothesis is supported (or one could say that the null hypothesis is rejected).

Table 4.3 - Correlation matrix among the performances and the board composition variables

<table>
<thead>
<tr>
<th>p-value (1-tailed)</th>
<th>LnTobinQ</th>
<th>ROE</th>
<th>LnP/B</th>
<th>INED</th>
<th>AGE</th>
<th>SIZE</th>
<th>DUALITY</th>
<th>GENDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>LnTobinQ</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LnP/B</td>
<td></td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INED</td>
<td>0.000**</td>
<td>0.474</td>
<td>0.000**</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>0.002**</td>
<td>0.001**</td>
<td>0.000**</td>
<td>0.000</td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>0.008**</td>
<td>0.043*</td>
<td>0.4160</td>
<td>0.000</td>
<td>0.006</td>
<td>0.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DUALITY</td>
<td>0.134</td>
<td>0.402</td>
<td>0.377</td>
<td>0.015</td>
<td>0.149</td>
<td>0.412</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>GENDER</td>
<td>0.243</td>
<td>0.116</td>
<td>0.306</td>
<td>0.001</td>
<td>0.003</td>
<td>0.021</td>
<td>0.005</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Notes: N=297 for ROE; N=295 for LnTobinQ; N=327 for LnP/B

**correlation is significant at the 0.01 level (1-tailed)
*correlation is significant at the 0.05 level (1-tailed)

Table 4.3 shows whether the p-value for the relation between two variables is significantly correlated. The relation between two variables is significantly correlated when the p-value is less than 0.05.
Table 4.4 - Pearson correlation test statistic between performances and board composition variables

<table>
<thead>
<tr>
<th>r-value</th>
<th>LnTobinQ</th>
<th>ROE</th>
<th>LnP/B</th>
<th>INED</th>
<th>AGE</th>
<th>SIZE</th>
<th>GENDER</th>
</tr>
</thead>
<tbody>
<tr>
<td>LnTobinQ</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LnP/B</td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INED</td>
<td>0.195</td>
<td>-0.004</td>
<td>0.207</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>0.170</td>
<td>0.176</td>
<td>0.270</td>
<td>0.248</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.139</td>
<td>0.095</td>
<td>0.027</td>
<td>-0.399</td>
<td>0.149</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>DUALITY</td>
<td>0.065</td>
<td>0.013</td>
<td>-0.028</td>
<td>-0.129</td>
<td>0.062</td>
<td>-0.013</td>
<td>1.000</td>
</tr>
<tr>
<td>GENDER</td>
<td>-0.041</td>
<td>0.066</td>
<td>0.017</td>
<td>-0.181</td>
<td>-0.160</td>
<td>0.120</td>
<td>0.153</td>
</tr>
</tbody>
</table>

Notes: N=297 for ROE; N=295 for LnTobinQ; N=327 for LnP/B

Table 4.4 presents information about the strength of the relation between the variables. It summarizes the coefficient r-value. The high value of r indicates that the variables have a strong linear fashion in either a positive or negative relationship. The fact that the sign of r is positive indicates that as the values of one variable (i.e. Tobin’s Q) increase the values of the other increase as well.

4.2.1 Correlation between return-on-equity and board composition

For the dependent variable return on equity, it is found that AGE and SIZE are significantly correlated to return on equity as their p-values are 0.001 and 0.043 respectively. Both are positively correlated with Pearson’s values of 0.176 and 0.095 respectively. The research hypotheses of H3-2 and H4-2 are supported. The research hypothesis of H1 is not supported as the p-value is equal to 0.474; as it is larger than 0.05, this means the INEDs have no significant relationship with return on equity. CEO duality has a p-value equal to 0.402, larger than 0.05, which means that CEO duality has no significant effect on return on equity. Hence the research hypothesis of H2 is not supported. The results show that the research hypothesis of H3 is not supported, but it is statistically correlated with an actual p-
value of 0.001. Hypothesis H3-2 that the average director age correlates positively to return on equity is supported because the relationship is positively correlated between board age and return on equity when the Pearson correlation test statistic is 0.176. This result indicates that any change in board age have a significant positive effect on the return on equity. For the case of board size, the testing hypothesis H4 is not supported because the Pearson coefficient is positive. H4-2, that the board size correlates positively to return on equity when the p-value is 0.043 and Pearson coefficient is 0.095, is supported, so a change in a given unit of board size has a significant positive effect on the return on equity. That means return on equity increases when board size increases. Board age is correlated more strongly to return on equity than board size as their Pearson correlation statistics are 0.176 and 0.095 respectively. As the p-value of gender diversity is 0.116, larger than 0.05, gender diversity is not significantly correlated to return on equity, and the research hypothesis of H5 is not supported.

The result shows that only the research hypotheses of H3-2 and H4-2 are supported at the 5% significant level. The research hypotheses of H1, H2, H3, H4 and H5 are not supported at the 5% significant level.

4.2.2 Correlations between Tobin’s Q and board composition

In this research, it is found that INED, AGE and SIZE are significantly correlated to the natural logarithm of Tobin’s Q as their p-values are 0.000, 0.002 and 0.008 respectively. The research hypotheses of H1-1 is supported, as the p-value is 0.000; this means that a higher percentage of independent directors correlates to a higher natural logarithmic value of Tobin’s Q, and that a change in a given value of INED has a significant positive effect on the LnTobinQ as the Pearson correlation statistic is 0.195. This effect of INED is better recognised as good governance than other board compositions by investors. The p-value of CEO duality is 0.283 (> 0.05); this means CEO duality has no significant effect on LnTobinQ, and the research hypothesis of H2-1 is not supported. The research hypothesis of H3-1 is not supported, but research hypothesis H3-2 is supported and it is positively
correlated to LnTobinQ with a p-value of 0.002. There is a positively correlation between board age and LnTobinQ since the Pearson Correlation test statistic is 0.170. This result indicates that a change in a given board age has a significant positive effect on the LnTobinQ. For the case of board size, the research hypothesis H4-1 is supported as the p-value is 0.001 and the Pearson coefficient is -0.139. This means a change in a given value of board size will have a significant negative effect on the Tobin’s Q. The strength of correlation is the weakest among INED, AGE and SIZE. The value of Tobin’s Q increases when board size decreases. Research hypothesis H4-3 is not supported. Gender diversity has a p-value 0.16 (>0.05), so gender diversity is also not significantly correlated to LnTobinQ, and the research hypothesis of H5-1 is not supported.

Research hypotheses of H1-1, H3-3 and H4-1 are supported at the 5% significant level. The research hypotheses of H2-1, H3-1, H4-3 and H5-1 are not supported at the 5% significant level.

4.2.3 Correlations between price-to-book ratio and board composition

Price-to-book ratio is not the variable for testing the research hypotheses. The outcomes of correlation analysis of price-to-book ratio are used for checking whether they are consistent with the results of Tobin’s Q. For the correlation test on the variable of natural logarithm of price-to-book ratio with INED, board age, board size, CEO duality and gender diversity, the results show that it correlates positively to INED and board age with p-values of <0.001 and <0.001 respectively. INED and director age are positively and significantly correlated to the variable of natural logarithm of price-to-book ratio. The Pearson’s values are 0.207 and 0.27 for INED and board age respectively. That means the greater the percentage of INED, the higher the value of price-to-book ratio, and the older the board, the greater the price-to-book ratio. There is no relationship with board size, CEO duality and gender diversity. The results are consistent with the research hypotheses H1-1 and H3-3 that INED and board age are positively and significantly correlated to Tobin’s Q.
4.2.4 Hypotheses testing

The results show that the research hypotheses of H1-1, H3-2, H3-3, H4-1 and H4-2 are supported at the 5% significant level. That means all these independent variables are significantly correlated to firm performance. In the case of H-share companies, higher percentage of independent directors on boards yields a higher value for Tobin’s Q. But the percentage of independent directors does not have a significance effect on return on equity. Market perception is positive for good corporate governance that is gained by more board independence. Regarding board age, although H3 and H3-1 are not supported as they have a positive Pearson’s coefficient. However, they are statistically positively correlated to both return on equity and Tobin’s Q. Both the market measure and accounting-based measure support the theory that higher board age produces better performance. After testing, hypothesis H4 is not supported, but H4-1 is supported. Although H4 is not supported, but board size is statistically correlated to both return-on-equity and Tobin’s Q. It is positively correlated to return-on-equity, and negatively related to Tobin’s Q. After testing, hypotheses on CEO duality and gender diversity are not supported since their significance values are larger than 5%, they are not significantly correlated. The results of the hypotheses testing are summarized in Table 4.5.
Table 4.5 Results of the Hypotheses Testing

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Descriptions</th>
<th>Testing results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>The percentage of independent directors correlates positively to return on equity.</td>
<td>Not supported &amp; not statistically associated</td>
</tr>
<tr>
<td>H1-1</td>
<td>The percentage of independent directors correlates positively to Tobin’s Q.</td>
<td>Supported &amp; positively associated</td>
</tr>
<tr>
<td>H2</td>
<td>CEO duality correlates negatively to return on equity</td>
<td>Not supported &amp; not statistically correlated</td>
</tr>
<tr>
<td>H2-1</td>
<td>CEO duality correlates negatively to Tobin’s Q</td>
<td>Not supported &amp; not statistically correlated</td>
</tr>
<tr>
<td>H3</td>
<td>Average director age of a board correlates negatively to return on equity</td>
<td>Not supported &amp; not statistically correlated</td>
</tr>
<tr>
<td>H3-1</td>
<td>Average director age of a board correlates negatively to Tobin’s Q</td>
<td>Not supported &amp; not statistically correlated</td>
</tr>
<tr>
<td>H3-2</td>
<td>Average director age of a board correlates positively to return on equity</td>
<td>Supported, significantly and positively correlated</td>
</tr>
<tr>
<td>H3-3</td>
<td>Average director age of a board correlates positively to Tobin’s Q</td>
<td>Supported, significantly and positively correlated</td>
</tr>
<tr>
<td>H4</td>
<td>Board size correlates negatively to return on equity</td>
<td>Not supported and not statistically correlated</td>
</tr>
<tr>
<td>H4-1</td>
<td>Board size correlates negatively to Tobin’s Q</td>
<td>Supported, significantly and negatively correlated</td>
</tr>
<tr>
<td>H4-2</td>
<td>Board size correlates positively to return on equity</td>
<td>Supported, significantly and positively correlated</td>
</tr>
<tr>
<td>H4-3</td>
<td>Board size correlates positively to Tobin’s Q</td>
<td>Not supported and not statistically correlated</td>
</tr>
<tr>
<td>H5</td>
<td>Gender diversity correlates negatively to return on equity</td>
<td>Not supported and not significantly correlated</td>
</tr>
<tr>
<td>H5-1</td>
<td>Gender diversity correlates negatively to Tobin’s Q</td>
<td>Not supported and not significantly correlated</td>
</tr>
</tbody>
</table>
4.3 Regression Analysis

In this analysis, ordinary least squares regression analysis is used to test whether the independent variables are correlated with one another and with return on equity, Tobin’s Q and price-to-book ratio. A simultaneous model is used by entering all independent variables in the regression equation at once in order to examine the relationships between predictors (INED, CEO Duality, AGE, SIZE and GENDER) and the dependent variables (ROE, Tobin’s Q and P/B ratio).

In regression analysis, the assumption of normality is a prerequisite. This study uses the Kolmogorov-Smirnov statistic (Chakravarti, Laha, & Roy, 1967), with Lilliefors significance level as the statistics to test normality. After screening out the data of outliers, samples size of return on equity is 297, LnTobinQ is 295 and LnP/B is 327. The significance level of the Kolmogorov-Smirnov statistic with Lilliefors is 0.2 (which is greater than 0.05) for return on equity, so normality is assumed. For Tobin’s Q value, a natural logarithmic transformation is applied to access normality, the significant value is 0.02, it is close to normality. For price-to-book ratio, a natural logarithmic transformation is applied to access normality, and as the significant value is 0.2, normality is assumed. Aside from Kolmogorov-Smirnov statistic, the normal P-P plot and the Scatterplot are applied for checking normality.

The results of three regression models each tested with year dummies are presented in Table 4.6 where the dependent variables are return on equity, LnTobinQ and LnP/B. Figure 4.1, Figure 4.2 and Figure 4.3 present the scatter plots for the regression model on ROE, LnTobinQ and LnP/B. Figure 4.4, Figure 4.5 and Figure 4.6 show the normal P-P plots of regression standardized residual for dependent regression models on ROE, LnTobinQ and LnP/B.
Table 4.6 Ordinary least squares regression coefficients for dependent variables of Tobin’s Q, price-to-book ratio and return on equity

<table>
<thead>
<tr>
<th></th>
<th>LnTobinQ with year dummy</th>
<th>LnP/B with year dummy</th>
<th>Return on equity with year dummy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.509 (0.044)</td>
<td>-3.041 (0.000)</td>
<td>-0.314 (0.007)</td>
</tr>
<tr>
<td>Year Dummy 09</td>
<td>0.162 (0.000)</td>
<td>0.554 (0.000)</td>
<td>0.006 (0.733)</td>
</tr>
<tr>
<td>Year Dummy 10</td>
<td>0.148 (0.001)</td>
<td>0.537 (0.000)</td>
<td>0.057 (0.003)</td>
</tr>
<tr>
<td>INED</td>
<td>0.500 (0.035)</td>
<td>1.715 (0.001)</td>
<td>-0.013 (0.903)</td>
</tr>
<tr>
<td>CEO Duality</td>
<td>0.058 (0.179)</td>
<td>-0.012 (0.895)</td>
<td>-0.002 (0.917)</td>
</tr>
<tr>
<td>AGE</td>
<td>0.011 (0.031)</td>
<td>0.039 (0.000)</td>
<td>0.347 (0.004)</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.011 (0.114)</td>
<td>0.021 (0.174)</td>
<td>0.037 (0.294)</td>
</tr>
<tr>
<td>GENDER</td>
<td>-0.046 (0.816)</td>
<td>0.541 (0.202)</td>
<td>0.126 (0.15)</td>
</tr>
<tr>
<td>F-statistics</td>
<td>5.85</td>
<td>13.11</td>
<td>3.75</td>
</tr>
<tr>
<td>p-value (F-statistics)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.001</td>
</tr>
<tr>
<td>R-square</td>
<td>0.125</td>
<td>0.223</td>
<td>0.076</td>
</tr>
<tr>
<td>Adjusted R-square</td>
<td>0.103</td>
<td>0.206</td>
<td>0.101</td>
</tr>
<tr>
<td>Sample size</td>
<td>295</td>
<td>327</td>
<td>297</td>
</tr>
</tbody>
</table>

Note: figures in ( ) are the significant values for the corresponding coefficients.

For regression model (1), the model summary shows that YD09, YD10, INED, DUALITY, AGE, SIZE, and GENDER together explain 7.6% of the variance (R-square) in return on equity, which is significant, F(7, 289) = 3.75, p = 0.001. The regression model for return on equity, therefore, can be concluded to be statistically significant.

For regression model (2), the model summary shows that YD09, YD10, INED, DUALITY, AGE, SIZE, and GENDER together explain 12.5% of the variance (R-square) in Tobin’s Q.
which is significant, $F(7, 287) = 5.85, p < 0.001$. The regression model for Tobin’s Q, therefore, can be concluded to be statistically significant.

For regression model (3), the model summary shows that YD09, YD10, INED, AGE, SIZE, CEO Duality and GENDER together explain 22.3% of the variance (R-square) in price-to-book ratio, which is significant, as, $F(7, 319) = 13.11, p < 0.001$. The regression model for price-to-book ratio, therefore, can be concluded to be statistically significant.

The predictors YD09, YD10, INED, AGE, SIZE, CEO Duality and GENDER account for 22.3% of the variance in price-to-book ratio, 12.5% of the variance in Tobin’s Q, but only 7.6% of the variance in ROE.

The scatterplot examines the substantial heteroscedasticity (a collection of random variables), non-linearity, and for outliers. Figures 4.1, 4.2 and 4.3 show the scatterplot of residuals against predicted values of INED, DUALITY, AGE, SIZE and GENDER, the results show that there are no clear relationship between the residuals and the predicted values for regression models of return on equity, Tobin’s Q and price-to-book ratio. This is consistent with the assumption of linearity. Although there are two or three points that may be outliers, the homogeneity of variance assumption does not appear to be substantially violated.
Figure 4.1 Scatterplot for regression model of Return on Equity

Figure 4.2 Scatterplot for regression model of natural Log of Tobin’s Q
Figure 4.3 Scatterplot for regression model of natural Log of Price-to-book ratio

The normal P-P plot examines any substantial departures from normality exhibited as deviations from the diagonal line. The normal plots shown in Figure 4.4, Figure 4.5 and Figure 4.6 examine the standardised residuals for the dependent variable indicate a relatively normal distribution for dependent variables return on equity, LnTobinQ and LnP/B, and the sample size is 42 times more than predictors (INED, CEO Duality, AGE, SIZE and DIVERSITY). The examination of the data with scatter plots and normal P-P plots reveals no serious threats to underlying distributional assumptions of the residuals. All of these fulfil the requirement of the assumptions underpinning the use of OLS regression.
Figure 4.4 The normal P-P Plot of regression standardized residual on ROE

Figure 4.5 The normal P-P Plot of regression standardized residual on LnTobinQ
Figure 4.6 The normal P-P Plot of regression standardized residual on LnP/B

The regression equation (1) for predicting return on equity is:
Return on equity = -0.314 – 0.013 (INED) – 0.002 (DUALITY) + 0.347(AGE) + 0.037 (SIZE) + 0.126 (GENDER) + 0.006 (YD09) + 0.057 (YD10) + ε1

where -0.314 is the intercept of the equation. The coefficient of 0.347 tells how much return-on-equity value will change for a unit increase in the corresponding variables of AGE for a given value of all the other predictor variables in the equation, and where ε1 is the random error of the equation 1. Regression coefficient is a measure of how strongly the independent variables will predict the dependent variable. An examination of the t values and their respective p values (Table 4.6) indicates that only Board Age is a significant predictor of return on equity.

The regression equation (2) for predicting LnTobinQ is:
LnTobinQ = -0.509 + 0.5(INED) + 0.058(DUALITY) + 0.011(AGE) - 0.011(SIZE) - 0.046(GENDER) + 0.162(YD09) + 0.148(YD10) + ε2
where -0.509 is the intercept of the equation. The coefficients of 0.5 and 0.011 for INED and AGE tell us how much a LnTobinQ value will change for a unit increase in the corresponding variables (INED and AGE) for a given value of all the other predictor variables in the equation, where $\varepsilon_2$ is the random error of the equation 2. An examination of the t values and their respective p values (Table 4.6) indicate that both the percentage of independent directors (INED) and Board Age (AGE) are significant predictors of LnTobinQ.

The regression equation (3) for predicting LnP/B is:

$$\text{LnP/B} = -3.041 + 1.715\text{(INED)} - 0.012\text{(DUALITY)} + 0.039\text{(AGE)} + 0.021\text{(SIZE)} + 0.541\text{(GENDER)} + 0.554\text{(YD09)} + 0.537\text{(YD10)} + \varepsilon_3$$

where -3.041 is the intercept of the equation. The coefficients of 1.715 and 0.039 for INED and AGE tell us how much the LnP/B value will change for a unit increase in the corresponding variables (INED and AGE) for a given value of all the other predictor variables in the equation, where $\varepsilon_3$ is the random error of the equation 3. An examination of the t values and their corresponding p values (Table 4.6) indicates that the percentage of independent directors (INED) and Board Age (AGE) are significant predictors of LnP/B.

### 4.4 Empirical Results

During the period of 2008 to 2010, the H-share companies have operated profitably at an arithmetic mean of 9.89% on return-on-equity. For a market-based measure, Tobin’s Q value is 1.4, which delivers higher perceived value for money to its shareholders. Another market-based measure, the price-to-book ratio, shows a consistent result, such as Tobin’s Q, to have a mean of 1.77. The results show that independent directors are the minority on boards of H-share companies. The percentage of independent directors does not have significant effect on return-on-equity, but positively and significantly correlates to Tobin’s Q. This is consistent with the result of the price-to-book ratio that has a positive and significant relationship with INED. The results show that INED has no significance impact
on company profitability, but it is highly regarded as good corporate governance. The significance positive effect of INED on Tobin’s Q may relate to the investor’s recognition of better corporate governance in terms of greater board independence. Surprisingly, board age has a significant positive effect on both return-on-equity and Tobin’s Q: older boards benefit companies. Older directors benefit from having greater experience and more people connection. However, it must be noted that this is different in the case of innovative companies in Japan and the US. In addition, more members on boards produce better return-on-equity. In contrast, less members on boards lead to better Tobin’s Q. Market view board size is negatively correlated to firm performance. Figure 4.7 summarizes the findings of this study by presenting the independent variables that are significantly related to firm performance in terms of return on equity, Tobin’s Q and price-to-book ratio.

**Figure 4.7** Summary of the findings on significant correlations between board composition and financial performance

<table>
<thead>
<tr>
<th>Board Composition</th>
<th>Financial Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Percentage of Independent Directors</strong></td>
<td>+</td>
</tr>
<tr>
<td><strong>Average Director Age</strong></td>
<td>+</td>
</tr>
<tr>
<td><strong>Board Size</strong></td>
<td>+</td>
</tr>
<tr>
<td><strong>Price-to-book ratio</strong></td>
<td>+</td>
</tr>
<tr>
<td><strong>Return on Equity</strong></td>
<td>+</td>
</tr>
<tr>
<td><strong>Tobin’s Q</strong></td>
<td>-</td>
</tr>
</tbody>
</table>
4.5 Conclusion

This chapter has discussed the data analyses that are exhibited in descriptive, correlation and regression analysis. Chapter five will discuss the findings to the research with regards to findings and conclusions, implications, contributions, limitations and recommendations.
Chapter Five – Conclusions and Recommendations

In this research entitled “Independent directors and firm financial performance of H-share companies in Hong Kong”, the five key findings answer the specific research questions, which in turn answer the respective research problem. The corresponding hypotheses were tested from the data and deduced by agency, stewardship and resource dependence theories. The study tested the hypotheses which in turn also tested the theories that explain and predict the hypotheses. In addition, a regression equation for each of the financial performance variables measured by ROE, Tobin’s Q and price-to-book ratio was developed with respect to INED, CEO duality, director age, board size and gender diversity. The conclusions drawn through the interpretations of the data analysis and corresponding findings have been derived from data collected from annual report and corporate governance reports, with their extensive corporate governance disclosures, and not from any subjective or emotional values of the researcher.

The first section exhibits the corroboration of findings and conclusions reached. The second section exhibits the implications of the findings. The third section highlights the contributions and significance of this study. The fourth section discusses the limitations of this research and suggestions for future study. The final section summarises the results of the research.

5.1 Major Findings and Discussions

The objective of this research is to examine the importance of board independence, CEO duality and board composition and their impacts on the financial performance of H-share companies in Hong Kong. This has been accomplished by statistically examining the data of 109 H-share companies listed on the HKEx for the period of 2008 to 2010. The correlation and regression analysis has been carried out on cross-sectional data for three years from 2008 to 2010. The results indicate that there is a significant relationship between
the percentage of independent directors, average director age and board size to Tobin’s Q value. Furthermore, there is a significant relationship between average directors age and board size to return on equity. In comparing other literature that excludes director age as the determinant of board composition, the results of this study provide a deeper and wider view into the relationship between board independence and firm performance in H-share companies. This research allows us to draw the conclusions that more board independence leads to higher market value, but board independence has no significant influence on operating profit for H-share companies listed in Hong Kong. The results portrayed in this research will inspire policy makers and regulators to have regulatory change result in improved corporate governance practices and added value for the H-share companies.

In general, this study shows that the majority of the board members of H-share companies are made up of in-house directors and CEO non-duality structure. Under the one-share-one-vote system of Hong Kong, institutional investors have come to use shareholders voting rights to change the companies in which they invest. Investors tend to aggregate their power and participate more actively in corporate governance. H-share companies tend to shift the focus onto better corporate governance in terms of board independence when foreign investors increase their share ownership. The results indicate that there is a trend towards increasing the number of independent directors and less CEO duality, but it is on a slow moving trend and a long way to go.

5.1.1 Findings for independent directors

The results show that there is no significant relationship between the percentage of independent directors and return on equity on H-share companies. The most important issue relating to independence in H-share companies is independence from controlling shareholders. As the Chinese government retains control over H-share companies by its high level of state ownership, independent directors deem to have very few real powers for decision-making and making a significant impact on monitoring. The majority of directors on boards of H-share companies are nominated by the controlling shareholder who
represents the state government. And many independent directors in H-share companies are former government officials and members of the communist party with many years of service, thus their interests are arguably not always aligned with the company. Given such a representation, it is questionable whether the interests of other shareholders can be effectively protected, and how balanced decision-making can be reached. As long as the appointments and the remunerations of the independent directors are related to the boards and controlling shareholders, independent judgement is questionable.

Despite the independent directors being compliant with the regulatory definition of the HKEx (2004), it is questionable whether they have true “independence”. It is certain that they have knowledge and experience of business, but not whether they are superior to other available directors. As managers and controlling shareholders (state government) in H-share companies are insiders in the corporate governance mechanisms, not surprisingly, the result shows no statistically significant relationship between the percentage of independent directors and operating profitability. The assignment of more independent directors cannot effectively solve the problem related to separation between ownership and state control and even could not effectively reduce agency costs. It is noticeable that some independent directors serve as paid consultants to the company or be employed as professors of universities that receive funding from the company, and some independent directors have personal relationships with the board members that affect their independent role in corporate governance.

However, the percentage of independent directors is significantly and positively correlated to Tobin’s Q. Research question 1 was “Does the percentage of independent directors affect firm performance”, and the results show that hypothesis H1-1, which was “The percentage of independent director correlates positively to Tobin’s Q” is, therefore, supported. It is highly regarded to investors and shareholders that the more independent directors there are on a board, the greater is the level of board independence. Inside directors are always recognised as being self-serving. It is a common opinion of corporate governance critics in Australia (ASX, 2007), the UK (Higgs, 2006), and the US (SOX, 2002) to have a preference for “independent directors”. There has been significant shift away from boards
dominated by inside directors toward boards dominated by independent directors or outsider directors, particularly in the US and the UK. In short, it is assumed that a lack of such form of board independence is not desirable.

The separation between ownership and control is a natural consequence of a widely dispersed ownership structure in modern corporations. There should be a system of control over those managers to ensure that a company operates in the interests of shareholders. It has been recognised that parties who are independent of the corporation will make more dispassionate and better decisions than shareholders and insiders, which thereby, results in sounder corporate profitability. As posited by agency theory, a reduction in agency conflict lowers agency cost. Outside investors equate board independence with lower investment risk, and, therefore, are more likely to work with companies that have had success in this area.

Good corporate governance not only protects the interests and rights of the shareholders, but also promotes operational efficiency and makes it easier for firms to access cheaper external funds and investors. Not surprisingly, the stock market pays premiums for H-share companies with higher board independence. Investors recognise more board independence adds value to the company by reducing principal-agent problems and agency costs. Most importantly, it reduces their risk of a bad investment. Thus agency, stewardship and resource dependence theory together predict and explain the phenomenon of the investor’s perception. This is the reason for the positive relationship between the percentage of independent directors and Tobin’s Q value.

To realise the advantage of lowering the cost of capital and access to the foreign capital market and increase the ability to raise funds (Baker, Nofsinger, & Weaver, 2002), H-share companies change the board structure by including a higher percentage of independent directors when they list in Hong Kong, not only to comply to the listing rules of Hong Kong, but more importantly, to make informal agreement with institutional investors in terms of corporate governance. The market value of companies in terms of Tobin’s Q increases, however, arising from or as a result of reliance upon the increase in the
percentage of independent directors and is a sign of better corporate governance from investors.

The findings show that more board independence of H-share companies cannot lead to better profitability, but could significantly improve their market valuation (both Tobin’s Q and price-to-book ratio) in terms of better corporate governance.

5.1.2 Findings for CEO duality

There are approximately 25 companies out of 109 who have their CEO and chairman as the same person. This is about 23% of the sample. The percentage of CEO duality in H-share companies is less than those in family-owned business in Hong Kong and other Asian countries. It is also lower than the percentage of CEO duality in the US and the UK. This study finds that CEO duality does not correlate to both return on equity and Tobin’s Q in the years of 2008 to 2010 in the case of H-share companies.

Research question 2 was, “Should the CEO also be the chairman of the board?”; hypothesis H2 was that “CEO duality correlates negatively to return on equity” and H2-1 was that “CEO duality correlates negatively to Tobin’s Q”. This research shows that the research hypotheses of H2 and H2-1 are not supported. The result suggests that neither stewardship nor agency theory explain the phenomenon of the relationship between CEO duality and firm performance. The chief executive officer or chairman of the board of directors are the key people of the H-share companies; either the CEO or the chairman and sometimes both of them are appointed by the major shareholders, the holding companies or the state government as the representative of the controlling shareholder who has no concern for the interests of minority shareholders. An implication is that even though CEO duality or non-duality is one of the key determinants of the ideal composition of the board of directors, it has no significant influence on firm performance in the case of H-share companies.
5.1.3 Findings for director age

This research shows that director age is significantly and positively related to both return on equity and Tobin’s Q. Research question 3 was “Does board age have an impact on firm performance?”; hypothesis H3 was that “Average director age of a board correlates negatively to return on equity”; H3-1 was that “Average director age of a board correlates negatively to Tobin’s Q”; H3-2 was that “Average director age of a board correlates positively to return on equity”; and H3-3 was that “Average director age of a board correlates positively to Tobin’s Q”. Both research hypotheses H3 and H3-1 are not supported. In this sense, agency theory does not explain and predict the hypotheses of H3 and H3-1. However, H3-2 and H3-3 are supported and explained by resource dependence theory and stewardship theory. The average director age is statistically and positively related to both return on equity and Tobin’s Q. In previous studies, Fukui and Ushijima (2007) and Adams and Ferreira (2009) point out that director age is negatively correlated both to firm’s operating profitability (ROA) and market value (Tobin’s Q). Agency theory fails to find consistency with the view that an older board relates negatively to firm performance in the case of H-share companies. On the contrary, the positive role of board age on firm performance in the case of H-share companies is predicted by stewardship and resource dependence theory that an older board benefits from better experience, wider social networks and better capability to reach outside scare resources.

To understand the conflicting outcomes, it is necessary to evaluate their business environment and decision-making processes of H-share companies. China is still a developing country where businesses are not operating in rapidly-changing and innovative-based environments like the US and the UK. Instead, H-share companies are often engaged in energy, transport and communication businesses which are regarded as labour-intensive and resource-based industries. Taking risky and high growth investments may not be the objectives of a former state-owned enterprise. On the contrary, as older boards tend to stick to safer alternatives and low-growth strategies, such a management style is comparatively suitable for the business context in China. On the other hand, owing to the ownership concentration of the Chinese government, the H-share companies remain under state
control and the government plays an active role in management. To some extent the
decision-making of H-share companies undoubtedly has to consider their obligation to the
interests of the government. Even risk-taking strategies are essential to performance and
profitability, but they prefer taking offers of long-term value creation at the expense of
closer payback and high-growth investment.

Cultural and sociological issues are particular important when evaluating Chinese
companies. Human relationship is highly regarded and emphasized both in social and
business contexts. This cultural specificity is called *guanxi*, which describes the Chinese
business, political and social practices in mutually reciprocal relationships (Dunning & Kim,
2007). As relationships and human connections matter in doing business in China, older
directors benefit from people connections and make the culture of doing business different
from those of Western countries. Apart from relationship-based business, the government
plays a significant role in making regulatory measures, but also participates actively in the
management of H-share companies through nominating their representatives as the
directors on board. Not surprisingly, older directors benefit from their previous experiences
in government services, their social connections and their special relationships with
government officials. As resource dependence theorists posited that the theory is how
organizations seek to manage their environments. Resource dependence theory is a theory
of organization that seeks to explain organizational and inter-organizational behavior in
terms of critical resources that an organization must have in order to survive and success.
Such dependence makes the external constraint of organization behaviour possible as
asymmetrical exchange and power relations are created between organizations. Wheeler
and Davies (2004) regard this duty as benefiting and adding value to the companies by
helping and gaining access to external resources through better experience and people
connections.

In addition, the Chinese government monopolizes the access to equity finance in the sense
that they has a final say on which firm is qualified to have their project financed. Having a
good connection with government officials makes it easier and cheaper to fund their
projects. Such dependencies and power differentials created as a result of unequal resource
exchange. The effect of board age may not reduce agency cost in the case of H-share companies, but adds value to the companies by accessing external resources including funding and guanxi, particularly in China where one’s relationship in both social and business circles is highly emphasized.

Stewardship theorists posit that managers act as stewards of the company assets they control, while directors see their roles as being stewards of particular shareholding groups or the state government in the case of H-share companies. To turn these findings into a conclusion, both operating profit and market valuation increases significantly with an older board. It is supported by both resource dependence and stewardship theory that older boards get paid in the case of H-share companies.

5.1.4 Findings for board size

Board size relates significantly and positively to return on equity, but significantly and negatively relates to Tobin’s Q in the case of H-share companies. Research question 4 was, “Does board size affect firm performance?”; hypothesis H4 was that “Board Size correlates negatively to return on equity”; H4-1 was that “Board Size correlates negatively to Tobin’s Q”; H4-2 was that “Board Size correlates positively to return on equity”; and H4-3 was that “Board Size correlates positively to Tobin’s Q”. Research hypotheses H4 and H4-3 are not supported, but H4-1 and H4-2 are supported. The larger the boards the better the profitability, but smaller boards have better market value. Investors recognise that the smaller the board, the lower the agency cost. This is consistent with the perspective of agency theory that a smaller board positively correlates to firm financial performance (Yermack, 1996). In terms of company profitability (ROE), the result is consistent with the explanation and prediction of resource dependence theory which supports a positive relationship between board size and profitability.

Larger boards can be costly, but they are more likely to be associated with an increase in board diversity in terms of experience, skills and professional experiences (Dalton &
Dalton, 2005). These resources increase the ability to access markets, technologies, finance and materials, particularly in the business context of China where business heavily depends on people connection and *guanxi*.

Smaller boards spend most of their time in decision making, leaving less time for monitoring. The mean board size of H-share companies in this study is 10.94. However, there was a slight downward trend of the number of directors from 11 to 10.9 in 2008 and 2010. Hermalin and Weisbach (2003) document that economic Darwinism would eliminate a smaller board if a board with a small number of directors is harmful to firm value. This means that companies make changes in their board to have an optimal size.

To put these findings into a conclusion, increased board size in H-share companies leads to better firm profitability, but reduces market valuation. Not surprisingly, boards have a number of roles. Agency theory posits that internal mechanisms of control are able to effectively monitor management, but it does not explain the others roles of boards. It is not informative with regards to directors’ resources, and does not take into considerations of the directors’ competence. The role of the board of directors is also recognised as an effective means of obtaining external resources (Johnson *et al.*, 1996; Pearce & Zahra, 1989). Stewardship theory argues that managers act as responsible stewards of the company assets they control; directors see their roles as being stewards of particular interest groups, the state government or ministry in the case of H-share companies, when they are appointed as directors on the board by the major shareholders. In addition, resource dependence theory supports a positive relationship between board size and firm profitability while allowing more access to external resources, particularly the importance of social network in China. However, investors recognise that the larger the board, the higher the agency cost. Market value decreases significantly when board size increases. Thus, H-share companies shift to smaller board (from 2008 to 2010) to align with the investors’ expectation even larger boards produce better profitability.
5.1.5 Findings for gender diversity

In this study, women constitute 8.22% of directors. The percentage of women directors has increased by approximately 9% compound each year for the 2 years from 2008 to 2010, rising from 7.56% in 2008 to 8.96% in 2010. The increase in the numbers of women directors may be driven by many proposals for governance reforms and regulatory changes stressing the importance of gender diversity on boards. Or it could be attributable to the demand and supply of women directors in China. Research question 5 was “Does gender diversity affect firm performance?”; hypothesis H5 was that “Gender diversity correlates negatively to return on equity”; and H5-1 was that “Gender diversity correlates negatively to Tobin’s Q”. Both research hypotheses H5 and H5-1 are not supported. This research concludes that gender diversity has no impact on return on equity and Tobin’s Q. Not surprisingly, like these globally recognised companies, Toyota, Zale, Bulgari and Fiat have something in common is that no women on their boards of directors, even their brands market to women and rely on women for most of their income. In some countries, such as Italy and Japan, the gender disparity in the boardroom is particularly apparent. This research finds that gender diversity does not correlate to both return on equity and Tobin’s Q in the case of H-share companies.

5.2 Implications of the Findings

The above results indicate that H-share companies who turn to outside sources of capital need to demonstrate sound corporate governance to investors. There are only 36.3% of independent directors on H-share company boards as they are dominated by inside directors. All H-share companies are in compliance with the independent director system of Hong Kong. The percentage of CEO duality is also lower than that of the advanced economies such as the US and the UK. Good governance is highly regarded by investors as necessity to operational success and lower risk investment, and, thereby, they are more likely to work with such companies, and pay a higher price for the stocks which have greater board independence. Most importantly, investors see that their investments could be protected.
With an emphasis on playing an important role by contributing an unbiased view of what is best for companies; board independence is one of the key factors of an ideal composition of boards of directors. Not surprisingly, this study finds that the percentage of independent directors positively relates to Tobin’s Q, a market-based measure of firm performance. Investors believe that independent directors should be represented even more numerically on H-share companies than they are today. The result has implications for policy makers as investors pay for greater board independence.

However, the agency conflicts of H-share companies are largely between controlling shareholders and minority shareholders instead of between managers and shareholders. An independent director is not an effective prescription for reducing agency cost and increasing profitability in the case of H-share companies. The presence of more independent directors on boards does not effectively reduce agency costs. Independent directors need to be not only truly independent, but also to effectively provide independent oversight on behalf of shareholders. Shareholders like the state government may focus on society as a whole, government officials may focus on increasing tax and employment, but only minority shareholders will focus on dividends and company performance. The responsibility of independent directors is to accomplish a balance of these influences while protecting the interests of all shareholders. Not surprisingly, the percentage of independent directors has no significant influence on firm profitability in terms of return on equity within a control based system in which the controlling shareholders, in most cases are the state government; employ all possible governance mechanisms to control the companies. Gilson and Kraakman (1991) mention that corporate boards require directors who are not only independent, but who are accountable to shareholders as well.

As Boycko, Shleifer and Vishny (1996) suggested politicians who are appointed as managers do not concern themselves with profits. An independent director system should not only reduce agency cost, but serve as the board’s watchdog on compliance with ethical and legal requirements. Agency theory ignores competence. Managers are made honest by board control does not equate to competence to meet shareholder objectives. The evidence draws the attention to policy makers of Hong Kong to make governance reforms and
regulatory changes to enhance the roles, functions and remuneration mechanisms of independent directors when formulating independent director systems to prevent it becoming a snare for unwary investors. More importantly, investors have to understand the fundamental differences between independent director systems in the Western countries and those in Chinese listed companies. Independent director systems in Chinese companies should also provide a check against abuse by controlling shareholders instead of controlling management. A corporate governance reform should include an independent director system that guarantees the independent directors act at the best interest of all shareholders instead of being the protector of the state government.

CEO duality and gender diversity have no significant influence on firm performance. An implication is that both CEO duality and gender diversity are statistically irrelevant to firm performance and are not the key determinants of an ideal composition of boards of directors in the case of H-share companies.

Average director age has a positive influence on company profitability as well as market value. The phenomenon can be explained by both stewardship theory and resource dependency theory that the more diverse experiences of older directors largely benefit the company. Board members act in the best interests of the company as a whole. They put the financial success of the company before their own interests. In this case, board age is a significant factor of an ideal composition of boards of directors in the case of H-share companies.

The larger the boards the greater the profitability, but smaller boards have a higher market value. It is arguably that most of the directors of H-share companies are related to the controlling shareholders; in most cases are state government. Given this board representation, larger the boards greater the ability to access markets, technologies, finance and materials in the business context of China where business heavily depends on people connection and guanxi.
There are several implications from the research findings. First, good corporate governance practices are not universal (Coles, Daniel, & Naveen, 2008). They rely on the market context and firm characteristics. Second, Hong Kong’s difficulties in establishing a sound corporate governance environment is related to various factors including agency problems associated with complex ownership structures, conflicting objectives, different cultures and political responsibility among major owners, minority shareholders, board members and managers in the case of H-share companies. Third, strengthening the independent director system does not rely only on the quantity of independent directors; more important is the quality of the independent directors. How the independent directors are selected is an important issue of corporate governance. How can the independent directors work independently when their nominations, salaries and remunerations are decided by the people they are monitoring? These relationships create independence issues and questions about whether independent directors would be confrontational with top management when warranted. The independent director system is part of the governance mechanisms, but it does not effectively improve corporate governance by reducing agency cost and add value to shareholders in the case of H-share companies. Lastly, the market does not penalise a non-significant relationship between the independent director system and profitability, on the contrary, investors equate the increase in the number of independent directors with market value. In order to protect shareholders’ interests, regulators in Hong Kong need to seek a governance system that not only addresses the deficiencies of the independent director system, as well as the CEO duality or non-duality, but also aims to solve the agency problem by which a conflict of interests arose between shareholders in the case of H-share companies which the controlling shareholders, in most cases, are state government.

An important implication is that agency theory strongly emphasizes on managerial self-interest, and ignores the directors’ competence. No single theory to date fully explains boards of directors, and multiple theories are necessary to understand the many internal governance mechanisms that the way in which are structured and performed. Regulators of Hong Kong have this research findings on which to base their decisions.
5.3 Contributions

Firstly, this study extends the mainstream literature on director independence and board composition and its relationships with company financial performance to the H-share companies which incorporated and have their business operating in China, but issued and traded on the Hong Kong Stock Exchange. The differences of governance mechanisms, business laws, agency issues in the socialist context of China provide a broader examination of the concept of agency theory by which has been developed and focused in capitalist economies. Apart from differences in economic systems, China has not wholly copied the western solutions in its course of modernization and corporatization. Their privatization of state-owned companies has involved listing only a small proportion of their ownership to public, while the government retains controlling ownership of the companies and participates actively in their management. This study provides more insight into the reform of an effective corporate governance system that aims to benefit shareholders, not just the major owner in the case of H-share companies.

Secondly, notwithstanding the corporatization of state-owned enterprises of Chinese government involving the setup of an independent legal entity and commercialization of activities so as to be governed by commercial law, the state government is still the controlling shareholder and maintains control over the previously state-owned companies. This study is the most comprehensive one yet on the subject of board independence on H-share companies. Given the growing economy of China, Chinese companies will continue to cross-list on other stock exchanges, including the NASDAQ, New York, London and Singapore markets. This study finds that the conventional agency problem is not fully applicable to H-share companies because the problem is not only a separation of management and ownership. Thus, the H-share Company provides a context for examining whether the Anglo-Saxon legal and independent director system works in equity market in which the corporate sector is dominated by state ownership. The findings of this study contribute to the cross-listing literature in the study of corporate governance and firm financial performance. It provides regulators with hints to make regulatory changes effectively designed to govern the cross-listed Chinese companies on the other stock
exchanges, such as London, New York and Singapore, which have the same legal environment.

Thirdly, most of the previous studies address the agency problem that managers need to be controlled to prevent company resources from expropriation. Some of them conclude that board independence and various measures on board attributes clearly benefit the company and bring superior firm performance. However, some researchers find no relationship or even negative correlation between board independence and firm performance, particularly on emerging economies. The absence of clear correlations between board independence and firm performance may be perplexing for the agency approaches and their limitations on corporate governance. This study addresses the governance problem more comprehensively from agency, stewardship and resource dependence perspectives. The conflicting outcomes are consistent with the conclusion of Brown et al. (2011) that a multidisciplinary approach to developing better theory is required to explain whether various corporate governance practices substitute for each other or are complements. Cannella, Daily and Dalton (2003) also posit agency perspective as the dominant theory with other theories acting as compliments.

Fourthly, looking towards the independent variables used most often in the study of board composition, agency theory does not provide strong support in favour of or against director age on boards (Carter et al., 2010). Very few studies have paid attention to the role of director age, even though the information is available for collection. This study provides investors with insights into the factor affecting company value other than requirements of regulation, such as director age.

Fifthly, this study finds that conventional wisdom of agency theory is not applicable to H-share companies but provides background data for future study considering the issues of board attributes in H-share companies. There are concerns that capital markets in China are immature compared with Hong Kong, and that legal systems are weak. Institutional differences exist by which weaken the applicability of the theory. As suggested by Brown et al. (2011) that better theories are required by which are complimentary, rather than
contradictory and mutually exclusive to explain whether various corporate governance practices substitute for each other or are complements.

Finally, in order to answer the research problem, “Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?”, this study identifies that age and board size have significantly positive relationships with company profitability on H-share companies. The implementation of more independent directors, indeed, has no significant relationship with firm profitability. Both director independence and CEO duality, which are considered as the most important parts of governance mechanism in reducing agency cost, show no impact on firm profitability in the case of H-share companies. Regulators should think about possible governance reform that includes measures to enhance the independent director system and CEO duality mechanisms by which effectively reduce agency costs and add value to companies in the case of H-share companies.

5.4 Limitations and Recommendations

Firstly, given the unique ownership structure of H-share companies where most companies are state-owned, the analysis of this study was based largely on the assumption of the effects and characteristics of state-owned companies. But this study does not take the effect of non-state-owned companies into consideration by setting up a non-state-owned dummy variable to separate the sample into two groups to see whether there are significant differences of each other with respect to director independence and board composition. In fact, there is still a minority of non-state-owned companies in the samples which allows us to further investigate whether the ownership structure, state-owned and non-state-owned, significantly influences the relationship between board independence and firm financial performance, or to ascertain whether or not there is a moderating effect of non-state-owned companies to the firm financial performance. Kang and Shivdasani (1995) find that significant concentration of ownership improves control management. In contrast, Hart
(1995) draws attention that large shareholdings will mitigate the agency problems. A state shareholding arguably leads to inefficient capital allocation and hinders effective corporate governance. It allows further investigation on whether the ownership structure significantly influences the decision of the appointment of independent directors. Future study could consider the factor of ownership structure in the case of H-share companies, either as a mediator or as a moderator on the relationship between board attributes and firm financial performance.

Secondly, the population of H-share companies was 144 at the end of 2010, and this research sample was 109 in this study. The total firm-year observation was 327 for year 2008 to 2010. Considering the sample size, this study did not analyse the data with the effects of industrial differences. For future study, it is suggested that industrial fixed effects could be included in the regression analysis as a factor of consideration when the population size increases.

Thirdly, this research considers CEO duality whereby the CEO and chairman are represented by the same person, but ignores the effect of the vice-chairman could be the CEO. This study finds that some of the H-shares companies have both a chairman and vice-chairman on their boards, and there are a few companies have their vice-chairman and CEO bear the same name in the annual report. Although CEO duality is accounted for by only 23% in this research, the figure is larger than this if both CEO and vice chairman are considered as duality. Should there be any effect of vice-chairman duality on firm financial performance? Further study remains to be done.

Fourthly, this research does not take the effect of dual-listing into consideration. Some of the H-share companies incorporated in mainland China issued and traded their shares on both the Hong Kong Stock Exchange and one of the two mainland Chinese stock exchanges (Shanghai and Shenzhen). The shares they issued and traded in Hong Kong are named “H-shares” and those issued and traded in mainland China are classified as “A-shares”. Wang and Jiang (2004) document that H-shares price discounts relative to A-shares during the time 1994 to 2000 because of the differences of ownership restrictions and market liquidity.
To a certain extent, dual-listing of H-share companies may be valued differently to non-dual listing companies. This study ignores the effect of dual-listing which can produce either a moderating effect on the relationship between board independence and firm financial performance in terms of market valuation. Future research could be done in this area.

Fifthly, this research found a significant number of the independent directors are located in Hong Kong, given that all the business of the cross-listed H-share companies are happened in mainland China at a different business context (socialist economy), whether this will help or hinder the directors’ ability to generate plans and give advices to affect company performance. It would be a fertile field for future research.

Finally, the inclusion of independent directors is a key factor in an ideal composition of boards of directors and is a check on management. The participation of independent directors is highly recognised as benefit to the minority shareholders. However, this is not a panacea to cure the problem of the separation of ownership and control, particularly in the case of H-share companies. In addition, the appointment of independent directors is absolutely not just window-dressing: a more sophisticated independent director system needs to be designed that involves not just complying numerical requirements of the HKEx, but, more importantly, paying attention to the issues of training, recruiting, appointment and remuneration. For future empirical study, a more comprehensive coding system should be developed to show the professional backgrounds and working experiences of the independent directors, and the relationships between CEO/chairman and independent directors. Those should be considered as a whole in the mechanism of independent director system, particularly in the case of H-share companies.

5.5 Summaries of the Findings

This research finds that the independent director system, CEO duality and gender diversity do not affect a firm’s profitability in the case of H-share companies. The results suggest
that the conventional wisdom of agency theory is not applicable to H-share companies because there is a agency conflict between controlling shareholders (state government) and minority shareholders instead of only a separation of ownership and control. Market value of H-share companies improves with the presence of more independent directors. This implies that investors are concerned with good independent director systems. Aside from the independent director system, director age is also the determining factor for good corporate governance practices and is positively and significantly related to profitability. Although board size is positively and significantly correlated to profitability, it also associates negatively with firm market value. Both CEO duality and gender diversity are not the concern of investors. They have no relationship with firm performance in terms of market value. The findings offer compelling evidence that independent director systems, average director age and board size are the important factors in explaining the market value of H-share companies. These address the policy issues of which factors concern most investors.

Because of the ownership structure and the identity of controlling shareholders, the agency conflicts within H-share companies are largely between controlling shareholders (state government) and minority shareholders. Regarding policy issues, governance reforms and regulatory changes including an independent director system should be developed to secure the interests and rights of all shareholders, not just the benefits associated with controlling shareholders.

In conclusion, the evidence shows that the H-share companies’ market value is positively and significantly associated with the percentage of independent directors in the H-share stock market. However, there is no relationship between the percentage of independent directors and firm profitability. The results answer the first research question, “Does the percentage of independent directors affect firm performance?” Regarding the second research question, “Should the CEO also be chairman of the board?”, there is no relationship found between CEO duality and profitability, and CEO duality is not a concern to investors. The significant and positive relationship of average director age and both profitability and market value answers the third research question, “Does board age have an
impact on firm performance?” For the fourth research question, “Does board size affect firm performance?” a significant and negative relationship is found between board size and market value, but a positive and significant association is found between board size and profitability. In answering question five that “Does gender diversity affect firm performance?”, it is consistent with previous studies that no significant relationship has been found.

All in all, the results answer the research problem, “Does a firm’s effects of director independence, CEO duality and board composition affect its financial performance in the case of Chinese H-share companies which cross-list their shares on the Hong Kong Stock Exchange?” The results show that the H-share companies with higher percentages of independent directors and higher director ages are associated with higher market value, but larger boards are associated with lower market value. H-share companies with higher director ages and larger board size are associated with higher profitability. The result indicates that investors should be concerned with the number of independent directors and board size of H-share companies in Hong Kong. This research highlights the importance of the policy issue of good corporate governance that concerns most investors. However, the present theories underpinning corporate governance are not strong enough to explain corporate governance activities in all circumstances, in particular the state-owned company such as H-share companies. A general theory of corporate governance that explains the relationship between individual, enterprises, family and state government is needed, where governance and board management are truly separated from the executive managers. In summary, this research provides evidence that good independent director systems are associated with higher market value of H-share companies in Hong Kong.

In today’s and tomorrow’s company, shareholder value is an imperative commanding issue of a publicly listed company. Maximizing the value of the company’s residue claims is not only, or even the primary, goal of the boards of directors. Boards of directors are not merely a figurehead to make up the total numbers of the boards; they should act to add value to the company. In particular, independent directors are required to bring with them a
number of advantages, including independence in their views and the ability to bring an outside perspective into the board.

Board independence has been able to convince most investors that such corporate governance mechanism could reduce agency cost and add value to the companies. However, the percentage of independent directors in H-share companies does not necessarily translate into profitability. As Cohan et al. (2012) observe that independent directors are overly sympathetic to management, while technically independent according to regulatory definitions. An independent director will not be deemed independent when their appointments and the remunerations are under control by the boards and CEO; such relationship make independent directors difficult to work independently and possible to be influenced by other board members and the CEOs. This is the major issue that reflects the reality of corporate governance in the case of H-share companies in Hong Kong. Independent directors are not merely status as board independence; they should perform independently too.

To ensuring sound corporate performance in H-share companies, the important initiative is, for the boards of the directors, to develop an identified independent leadership, not just by separating the roles of chairman of the board and CEO, but also appointing a majority of independent directors at more rigorous standards deemed to be director independence. Denis and McConnell (2003) observe the roles of directors of boards in many European countries are not specified in law. It is presented in vague language even the role is specified. As the Chief Justice of the Delaware Supreme Court, E. Norman Veasey, remarked at Jan, 2003 Harvard Business Review Roundtable, “there is a new set of expectations for directors……that is changing how the court looks at these issues” (Elson, 2003). A reform to address boardroom practices traditionally governed by law and “Best Practices” standards that have been advocated for years is undoubtedly called for, particularly for the cross-listing companies such as H-share companies where the views on the roles of the board are mixed, and differ across jurisdictions. Notwithstanding the fast speed of the development of the H-share market since their establishment in terms of the
number of listed H-share companies, the market still have a long way to go in terms of sophistication.


BRT. (1978). The role and composition of the board of directors of the large publicly owned corporation: Business Roundtable.


Appendix

List of Sample H-share Companies at the end of year 2010

Stanley Y F Wong
Appendix I. List of Sample H-share Companies at the end of year 2010

<table>
<thead>
<tr>
<th>Listing Date</th>
<th>Stock Code</th>
<th>Company Name</th>
<th>Market Cap (HK$)</th>
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<td>Total no.</td>
<td>109</td>
<td>Total Market Capitalization</td>
<td>4,029,167,982,459</td>
</tr>
</tbody>
</table>