

# Corporate Governance in the Alternative Investment Market of the London Stock Exchange

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## **DECLARATION OF AUTHORSHIP**

I, Neeta Shirish Shah, hereby declare that this thesis and the work presented in it is entirely my own. Where I have consulted the work of others, this is always clearly stated.

Signed: Neeta Shah

Date: 14 October 2014

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## ABSTRACT

This thesis examines corporate governance in the Alternative Investment Market (AIM) during the period 2008 to 2010. The thesis considers how corporate governance should be defined, key theories in corporate governance, development of corporate governance in the United Kingdom, factors that explain ownership structure and the development of AIM since 1995. The empirical research explores three themes.

First, using hand-collected data, involves the construction of corporate governance score covering corporate governance disclosures such as board committees, board independence, board power, board transparency, related party transactions and remuneration types. The main objective, here, is to evaluate the commitment to minimal requirements for good corporate governance. Corporate governance score is regressed against performance variables such as Tobin's Q (TQ) and return on assets (ROA). The regressions show that the corporate governance score is positively associated with company performance but that the relationship is not statistically significant.

Second, involves the investigation of the relationship between ownership type and company performance. The findings show that levels of ownership and performance are negatively associated. The relationship was influenced by company variables such as size, cash, debt, and corporate governance variables such as duality of the chief executive officer (CEO) and the chairman roles and the percentage of independent directors. The statistical significance of the relationship varies according to ownership type. The results demonstrate the presence of monitoring and expropriation effects.

Third, involves the examination of the determinants of CEO pay. Company size consistently shows association with CEO pay. The relationship between CEO pay and company performance depends on the proxy used to measure performance: TQ gives a positive and statistically significant result, whereas ROA gives a negative coefficient and not statistically significant. The impact of institutional shareholdings also differs depending on which proxy is used to measure performance.

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## ABBREVIATIONS

ABI	Association of British Insurers
ADR	American Depository Receipts
AIM	Alternative Investment Market
CBI	Confederation of British Insurers
CCAB	Consultative Committee of Accountancy Bodies
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CG	Corporate Governance
DAD	Designated Advisory for Disclosure
DEP. VAR.	Dependent Variable
DTI	Department of Trade and Industry
DTR	Disclosure and Transparency rules
EASD	European Association of Securities Dealers
EC	European Community
EEC	European Economic Community
EU	European Union
EVA	Economic Value Added
FCA	Financial Conduct Authority
FRC	Financial Reporting Council
FSA	Financial Services Authority
GAAP	Generally Accepted Accounting Principles
GMM	Generalised Methods of Moments
IASB	International Accounting Standards Board
ICAEW	Institute of Chartered Accountants in and Wales England
IFRS	International Financial Reporting Standards
LBS	London Business School
LSE	London Stock Exchange

LTIPs	Long Term Incentive Plans
MB, MBV	Market to Book Value
NAPF	National Association of Pension Funds
NASDAQ	National Association of Securities Dealers Automated Quotations
NEDs	Non-Executive Directors
NOMADS	Nominated Advisers
NYSE	New York Stock Exchange
OECD	Organization for Economic Co-operation and Development
OTC	Over the Counter
PRA	Prudential Regulation Authority
QCA	Quoted Companies Alliance
R&D	Research and Development
ROA	Return on Asset
ROE	Return on Equity
S&P	Standard and Poor
SEC	Securities and Exchange Commission
SME	Small and Medium-Sized Enterprise
SOX	Sarbanes-Oxley Act 2002
STD. DEV.	Standard Deviation
TCE	Transactional Cost Economics
TQ	Tobin's Q
TD	Transparency Directive
UK	United Kingdom
UKLA	UK Listing Authority
US, USA	United States of America
VC	Venture Capital
WB	World Bank

# CHAPTER 1 INTRODUCTION

## 1.1: Introduction

The aim of this thesis is to examine the relationship between corporate governance and corporate performance, on the London Stock Exchange (LSE) Alternative Investment Market (AIM). One of the most widely cited definitions of corporate governance is that of (Shleifer and Vishny 1997, 737): *‘the ways in which suppliers of finance to corporations assure themselves of getting a return on their investments’*. This definition draws attention to the range of corporate governance mechanisms that are likely to be observed in practice, particularly board structure, equity ownership and executive remuneration.

The study focuses on investigating the use of corporate governance in the AIM companies, characterised as small, growth-oriented companies in the United Kingdom, where the approach to corporate governance is flexible and principle-based. Many studies in the field of corporate governance use the United States of America as their main data source. Unlike the UK approach to corporate governance, the US approach to corporate governance is mandatory, since the enactment of the Sarbanes Oxley Act 2002 (SOX). In the US, corporate governance follows a common approach for all the companies listed on US stock exchanges, irrespective of the size of the company. The current study extends our knowledge of corporate governance by studying AIM companies in the UK, which are subject to less rigorous governance regime than larger companies listed on the main market of the LSE.

The study of corporate governance issues is important because of the risk that conflicts of interest will arise between the owners (shareholders) of a company and the company’s management; these conflicts are often referred to as agency problems (see Chapter 3). Research that adopts ‘agency theory’ has identified a range of potential and actual governance mechanisms, which help to mitigate these conflicts of interest and thereby enhance corporate performance. Governance mechanisms are conceptualised as deterrents to managerial opportunism and self-interest. Corporate

governance mechanisms should assure shareholders that managers will strive to achieve outcomes that are in the shareholders' interests (Shleifer and Vishny 1997).

An important feature that distinguishes listed companies in the US and UK from those in many other countries is that the UK and the US listed companies are more likely to have widely dispersed ownership. Corporations with dispersed ownership have no significant dominant owner or single owner holding substantial shares to enable that owner to control the corporation (Ishak and Napier 2006), that is, have a presence of large number of small shareholders. Although shareholders have ultimate residual control rights via their votes, various problems exist in such a setting. As each shareholding is relatively small in comparison to the total number of issued shares, it is virtually impossible for any individual shareholder, or even groups of shareholders, to achieve control over the operations of the company. As a consequence, the shareholders cede control to management via the board of directors and hence are vulnerable to the self-serving behaviour of executives (Keasey *et al.* 2005, 7). Although this may be less of a concern for some AIM companies, where founders still own substantial blocks of shares, other AIM companies have reached a stage where ownership is widely dispersed.

The various changes in corporate governance since the Cadbury Committee on The Financial Aspects of Corporate Governance (1992) have shown the importance of specific mechanisms for achieving effective corporate governance (McKnight and Weir 2009). The Cadbury Committee recommended several reforms, including the formation of three main board committees (audit, remuneration and nomination), splitting the functional roles of the Chief Executive Officer and Chair of the Board, and increasing the role and appointment of non-executive directors<sup>1</sup>. The introduction of the use of corporate governance communicates to shareholders a commitment to both jointly of accountability and transparency, something that the Cadbury Committee and its successors have explicitly advocated. Gray (2001, 11)

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<sup>1</sup> Throughout this thesis, the UK terminology, 'non-executive' or 'non-executive director' (NED) is used. This corresponds to the US terminology **outside** director.

defines accountability as '*identifying what one is responsible for and then providing information about that responsibility to those who have rights to that information*'.

Therefore, in terms of corporate governance and accountability, companies are seen either as a corporate entity or as represented by directors in a fiduciary role, are accountable to their shareholders. A major issue is the rights of other stakeholders and clarifying exactly what these rights entail, and this is further discussed in chapter three.

Since the Cadbury Report (1992), the UK has seen corporate governance evolve in response to financial scandals and crisis, which includes, among others, Maxwell and BCCI. Chapter 4 discusses the development of the UK Corporate Governance Code. The UK Corporate Governance Code consists of principles and provisions relating to various aspects of the governance of companies. In the United States, certain aspects of corporate governance have become part of the mandatory regulation due to the Sarbanes Oxley Act (2002). In contrast, UK has opted not to adopt mandatory corporate governance legislation, instead favours a voluntary market driven regime. Hence, UK has opted for a regime under which companies can choose the governance practices they wish to adopt but have to make disclosure in respect of their choices. The UK Governance Code does not form part of company law, so there are no legal obligations to adopt the Code; therefore, companies are not required to adopt particular governance practices or mechanisms. However, the stock exchange listing rules call for mandatory *disclosure*, where, companies have to state in their annual reports whether they are complying with the Code, and if not, explain why. Unlike companies listed on the main market of the LSE, AIM companies are not required to follow the Code. Instead, they have to adopt the Quoted Companies Alliance approach to corporate governance, which takes guidance from the Code. However, there may still be concerns regarding the transparency of AIM companies.

Despite the rapid growth in the number of both UK and International companies listing on the AIM, these companies have attracted relatively little attention from academic researchers (see Chapter 6 for a literature review). This inattention, at least in part, is due to lack of readily available data. For smaller AIM

companies, information was often not consistently accessible over several years, thus making comparative analysis impossible. Researchers needed to extract information for each company manually from the companies' annual reports, and this was time-consuming. However, this is no longer the case since all AIM companies must now have a website and upload the company's annual reports, which has made data gathering easier. Hence, it is likely that research interest in AIM companies will grow.

## **1.2: Motivation for the Study**

AIM is an exchange-regulated market, introduced by the LSE with the specific intention of attracting the listings of smaller, growth-orientated companies. Companies on the AIM are regulated using a 'lighter touch' than those on the main market, and this lighter touch regulation has led to a rapid rise in new initial public offerings on the AIM compared to the main market. However, the quality of companies on the AIM may be lower than the quality of companies on the main market. There is a perception that AIM companies are inherently riskier, and this has led to widespread belief that any significant failure of the AIM leading to a negative impact on the UK's stock market. This implies that the AIM provides an important research context for examining corporate governance and quantitatively assessing its association with company performance. Hence, this study investigates the link between corporate governance and performance for AIM companies.

In much of the literature on corporate governance, only larger publicly listed companies are the subject of analysis: a vast amount of empirical research on corporate governance and company performance emanate mainly from larger companies in both strong developed markets and emerging markets (Zahra 2014, 77). Only a small number of empirical corporate governance research relate to the AIM companies in the UK, and this provides considerable opportunities to contribute to the corporate governance literature. So far, empirical work on the AIM has been lacking partly due to difficulties in obtaining data. However, by employing a wide range of data sources, such research is certainly possible. This study not only studies governance of AIM companies empirically, but examines the context in which AIM

companies are governed, by investigating the definition of corporate governance, reviewing central theories used to understand corporate governance, reviewing the development of corporate governance regulation in the UK and elsewhere, and investigating specific institutional features of corporate governance on the AIM.

An important aspect of research into the governance and performance of AIM companies is being aware of potential differences in how the AIM companies are owned and managed, in comparison with the large UK listed companies that are commonly studied. A common implicit assumption is that the UK and the US publicly listed companies have a unitary board without an influential block holder. Hence, these companies exhibit the Berle and Means (1932) stereotype of dispersed ownership, which has been a major inspiration for agency theory. This stereotyped company is much less likely to exist among the AIM companies, and presence of dominant shareholders may be more common. Hence, there is a need for research into specific investigation of the ownership structure of AIM companies. It is also possible that the management structures and incentives of senior managers are different for AIM companies. For example, if there is less separation of ownership and control, then Chief Executive Officers may be significant owners of shares in their own right, and their compensation structures may systematically differ from those observed in larger companies and predicted by agency theory. Hence, there is a need to investigate the remuneration of CEOs of AIM companies.

### **1.3: Objectives of the Study**

Setting this thesis in context involved a comprehensive search of the existing literature. In addition, within definitions of corporate governance an understanding of corporate governance and the ways in which it has been researched was gained from leading corporate governance textbooks, for example, Mallin, Solomon, Monks and Minow, and more nuanced insights came from reading corporate governance reviews and surveys. Specific literature reviews include, for example, Eisenhardt (1989); Shleifer and Vishny (1997); Murphy (1999); Core *et al.* (2003); Young *et al.* (2008) and Bebchuk and Weisbach (2010). Because of the vast amount of information available on corporate governance, the thesis structure includes

theoretical and empirical chapters. This means that general issues of corporate governance theory and practice are addressed in general chapters while literature relating directly to the empirical studies is reviewed at the beginning of each of those chapters.

The first objective of this study is to review the definitions of corporate governance used by different authors, as this provides valuable knowledge in light of an upsurge in corporate governance study among both academic researchers and regulators. Is there any consensus among these definitions? This will involve summing up any common features such as system of regulation, legislation, governance structure and focus on shareholder or stakeholders.

The second objective is to understand the different corporate governance theories and establish the use of agency theory for this thesis. The systematic theoretical literature on corporate governance begins as early as the seminal work of Berle and Means (1932) on the separation of ownership and control. The development of a number of key theoretical frameworks helps to explain and analyse corporate governance issues. Chapter 3 will show that there are marked differences between the different theoretical frameworks, but there are obvious overlaps between them. Corporate governance has evolved differently in different countries according to the requirements of their institutional context and the economic development. However, in the UK the principal driver of the theory of the governance of listed companies is the necessity that managers act as agents of shareholders and thereby act in the best interests of the shareholders. Shareholders' interests suggest the maximisation of the equity return as the corporate objective to which the managers are accountable to the control and direction of their corporations. Agency theory is undertaken to be the main theoretical form for the thesis and to explain the corporate governance issues in AIM companies.

The third objective is to understand the development of corporate governance in the UK. Because of corporate failures in the early 1990s, the UK has initiated a series of reforms to corporate governance. Achieving this objective involves a brief

introduction to the development of the UK's corporate governance since the Cadbury Report (1992). An important feature of the UK corporate governance regime is based on the principle of 'comply or explain' approach, first recommended by the Cadbury Report (1992). The importance of the Cadbury report is captured by the London Stock Exchange's requirement for listed companies to disclose whether the company complies with the Code and, if not, to provide a statement justifying non-compliance.

The fourth objective is to consider the theoretical factors involved in determining the structure of equity ownership. Researchers have argued that corporate governance systems can be explained in terms of the country's legal origin, culture and political conditions. For example, according to La Porta *et al.* (2002) countries with common law legal origin have larger capital markets and more widely held companies compared to the civil law countries. An inference drawn from this is that the ownership patterns are a consequence of the legal protection provided to minority shareholders (Porta *et al.* 1999). An understanding of the theoretical literature on corporate ownership is important as ownership variable may explain the company performance of AIM companies.

The fifth objective is to examine structural and institutional factors that may have contributed to AIM success, which has survived and prospered since 1995, during which period some of its competitors have ceased to operate. AIM is an important market for UK's small and medium enterprises and any prominent financial scandal or collapse in this market may destroy investor confidence. Therefore, it is necessary for AIM companies to have appropriate corporate governance structures and effective checks and balances. This introduces the role of the Nominated Advisers, which is a unique feature of AIM and a substantial part of its success.

The sixth objective is to determine, for the AIM companies, the relationship between independent variables (company performance, size or governance) and specific dependent variables (governance, performance). The statistical analysis of

such relationships reflects the possible impact of other factors by including relevant control variables. The objective is achieved by developing appropriate hypotheses and then by gathering data and using regression analysis to test the hypotheses. Overall, the study includes three different areas in corporate governance: the relationship between a composite corporate governance index and company performance, the relationship between ownership and company performance and the determinants of CEO compensation. In each study, the results arise from different samples, reflecting the increasing availability of data during the period of the research. The empirical work consistently made use of computer software packages, such as EVIEWS7 and Excel, for data handling, estimating the statistical models and the data presentation.

#### **1.4: Research Questions**

The objectives set out in the previous section are addressed in different ways. The first five theoretical objectives involve a critical examination of both prior literature and descriptive material about the AIM. The sixth objective requires the statistical analysis of data relating to sample of the AIM companies.

The thesis aims to answer the following research questions:

##### **Theoretical Questions:**

To what extent can agency theory, which has been developed mainly in the context of large companies with widely dispersed ownership, be extended to smaller quoted companies where ownership may be more concentrated?

##### **Empirical Questions:**

First, does increase in overall corporate governance disclosure, by the AIM companies, be associated with higher company performance, that is, results from, or, does the individual attributes of corporate governance influence company performance?

Second, what are the determinants of ownership structure for the AIM companies? How do different ownership structures affect company performance?

Third, what are the determinants of Chief Executive Officer's pay for companies on the AIM?

## **1.5 : The Scope of this Study**

This study focuses on corporate governance for the companies listed on the AIM, an important market in the UK with a broad range of sectors. The AIM has been successful, in contrast to the Europe's 'new' markets for small companies, which recruited only the high tech companies, and this much reduced sector base may have contributed to its failure (Mendoza 2008). In this thesis, the AIM is the primary focus of study, however, throughout the thesis, comparisons with the LSE, other emerging stock exchanges and the US stock exchanges are made.

This study uses a quantitative approach for investigation of the relationship between corporate governance and company performance. The analysis of the data for various samples of AIM companies include for periods from 2008 (2007 if lagged data). The selection of this starting period is due to the changes to the 'AIM Rules for Companies', regarding acceptable accounting standards for AIM companies<sup>2</sup>. AIM 15 requires the mandating of International Accounting Standards for accounting periods commencing on or after 1 January 2007 for AIM companies that are incorporated in a European Economic Area member state and those that prepare consolidated financial statements. Hence, for this thesis information for financial data from annual reports were used from 2007 onwards for the AIM companies.

## **1.6: Research Study Limitations**

Limited Time: This research has limited time from 2008, and hence it may be difficult (to the extent that AIM has unique features) to generalise findings to other markets. However, there may still be insights as to the application of theoretical frameworks for understanding corporate governance.

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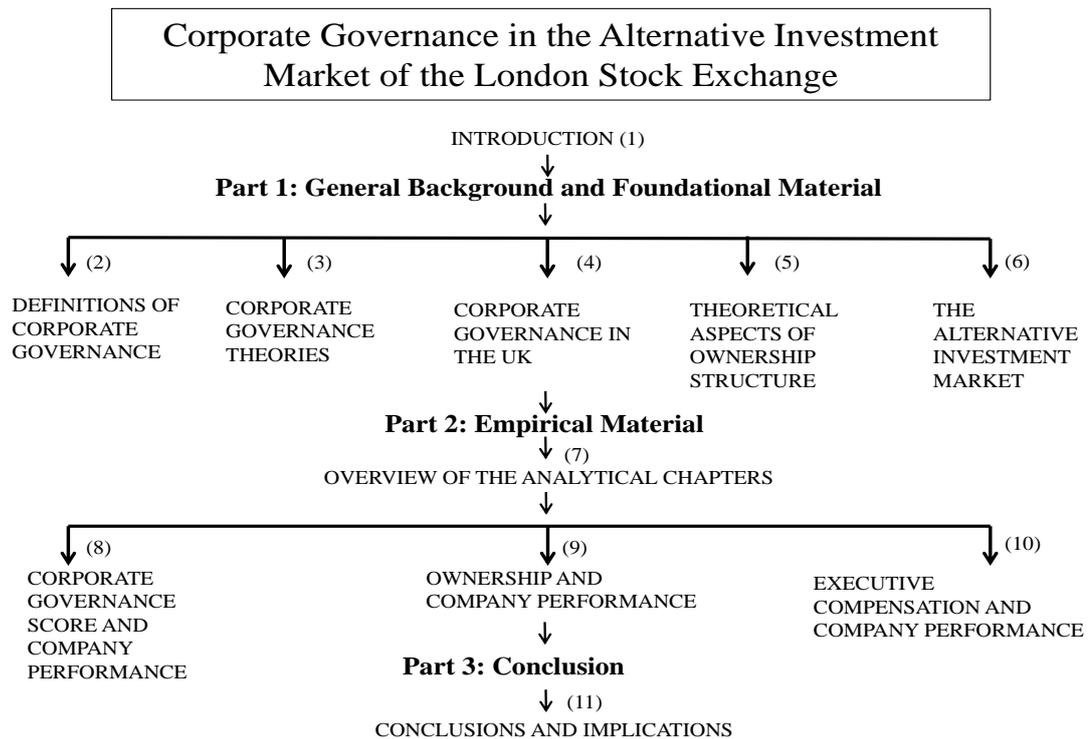
<sup>2</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notices/aim-notice-22.pdf>

Limited Sample: The unavailability of data for some AIM companies, particularly for earlier years, and the need to hand-collect data from printed or on-line financial statements, also limited the ability of the researcher to use large samples from the over 1,000 companies listed on the AIM. In some cases, lack of financial or market data, or the unrepresentative nature of such data, for example, some AIM companies have minimal turnover of their securities, thus obtaining market capitalisation data was highly problematic, meant that companies had to be excluded from the samples. Companies are often traded on AIM for only a few years before being taken over or delisted, and this means that company data are often not available throughout the period analysed. Hence, samples are inevitably small and may not always be representative of the AIM as a whole. However, the research provides detailed insights into aspects of corporate governance and performance for AIM companies that have hitherto not been available.

### **1.7: Organisation of the Thesis**

Figure 1.1 shows a schematic plan for the development of the thesis. The thesis is organised into three parts and eleven chapters including the introduction chapter:

**Figure 1.1: Plan of the Thesis**



## 1.8: Main Structure of the Thesis

The remaining 10 chapters of the thesis consist of three main parts. A brief synopsis showed below for parts 1, 2, and 3 and chapters 2 to 11.

### Part One: Background on Corporate Governance

Part 1 consists of chapters 2 to 6, providing an overview of corporate governance. These chapters offer an analysis of the various definitions of corporate governance over the last two decades, a brief history of corporate governance, corporate governance theories and systems, a discussion of corporate governance best practices focusing mainly on UK and a review of theoretical factors influencing the ownership structure.

*Chapter 2* - considers a range of definitions of corporate governance. The review of definitions shows that they differ widely. Overall, most definitions are either narrowly defined and express the view of the shareholders or more broadly defined to include the wider stakeholder groups. This thesis takes the definition of Shleifer and Vishny (1997, 737), that is, specific to the provision of finance; the

focus would be on how minority shareholders' interests are protected as suppliers of finance. For the AIM companies, the minority shareholders are vulnerable due to the expropriation by the blockholders.

**Chapter 3** - outlines the theoretical framework adopted by researchers in the study of corporate governance that help explain different governance mechanisms. It sets out the competing theoretical explanations used in corporate governance, beginning with the dominant agency theory in the understanding of corporate governance. Other theories such as stewardship and stakeholder are further discussed in chapter three. Wherever possible the various theories are linked to the AIM companies.

**Chapter 4** - builds a picture of the corporate governance system in the UK, this chapter provides an overview of the development of the corporate governance codes in UK from 1992 onwards to the UK Corporate Governance Code 2012. Keasey *et al.* (2005) suggest that corporate governance development show a shift from a narrow approach of focus on accountability to one that recognises the need for governance systems to create appropriate structures for potential growth. Interestingly, AIM companies are not expected to follow the recommendations of the UK Corporate Governance Code. However, as a minimum requirement AIM companies have to follow the governance regulatory specifically designed to meet the needs of smaller companies provided by the Quoted Companies Alliance.

**Chapter 5** - provides a theoretical perspective of ownership structure. It is interesting how both the US and UK listed companies predominantly share the fundamental characteristic of dispersed ownership as originally described by Berle and Means (1932). However, using mainly the work of La Porta studies, the chapter shows that the ownership structure does not generally conform to the separation of ownership and control paradigm, (that is, where ownership concentration is dispersed) but that ownership in many markets is both more concentrated. In addition, comparative reviews suggest that other factors such as culture, legal origin, religion and political environment heavily influence the adoption of appropriate

corporate governance structures, which in turn will affect the performance and thereby the valuation. Considering the characteristics of the AIM companies, the concentrated ownership structure is more likely to be applicable.

*Chapter 6* - provides a background study on the AIM as an exchange-regulated market owned and operated by the LSE specifically to allow small and fast growing companies to have easier access to the financial market. The success of the AIM comes from the flexibility endowed to the admission rules, which has proved to be attractive for companies wanting to list in the UK.

## **Part Two: Empirical Research**

Part 2 consists of four chapters: an overview and three empirical studies on corporate governance mechanisms using the AIM companies. This section consists of chapters 7 to 10, which examine the corporate governance disclosure, determinants of ownership structure and determinants of CEO pay for the AIM companies.

*Chapter 7*- outlines the methodologies, sources of data and the operationalisation of the variables used in the three empirical chapters 8, 9 and 10, for AIM.

*Chapter 8* - involves defining and calculating an overall corporate governance index, CGSCORE, for a sample of AIM companies, using hand-collected data for a sample of 56 companies for 2008 and 53 companies for 2009. The corporate governance variable is a composite measure of corporate governance disclosure practices. Since compliance with the corporate governance code is voluntary, the adoption of good corporate governance practices by companies is expected to be associated with higher company performance. An ordinary least squares regression results show that the disclosure in annual reports of the corporate governance attributes is not explained well by performance measures and other company specific control variables such as size, growth, ratio of capital expenditure over sales. The t-statistics for company level variables are statistically insignificant

in all specifications. Unlike other studies, corporate governance score has no statistical significance for company size (see Bruno and Claessens 2010). The major contribution of this chapter is to construct a corporate governance index, as a quality measure of corporate governance, for companies listed on LSE AIM.

*Chapter 9* – looks at the determinants of ownership structure in a sample of 131 AIM companies for the periods 2008 to 2010. Following from Demsetz and Lehn (1985), various determinants of ownership structure were examined empirically. The ownership data shows that the concentration of equity ownership in the AIM companies varies widely. From the literature, different ownership concentration measures have been used, for example, the shares held by chief executive office, the combined shares held by the board, shares held by the largest shareholder and shares held by five of the largest owners. Regressions are run with the alternative ownership measures as the dependent variables and company performance, as the independent variable, together with control variables. The company performance measures are Tobin's Q, return on assets and market to book value. The results show that different measures of ownership provide different results.

With Tobin's Q included as an explanatory variable, the coefficient is negative for different measures of ownership, but positive for institutional ownership. However, the statistical significance is only observed with CEO, director and institutional ownership holdings.

The volatility and the square form as the explanatory variables show a non-linear relationship with CEO ownership holdings, cumulative director ownership and institutional ownership holdings. For both CEO and director ownership holdings, volatility is negative, volatility square is positive, and both are statistically significant. With the institutional shareholdings, the relationship with volatility and volatility square shows a positive and negative coefficient, respectively and statistically significant. The statistical significant for the above three measures of ownership disappear when fixed-effects is included. With the largest ownership

holdings, there is no relationship. With the five largest shareholders, the relationship is non-linear and the signs reverse from positive to negative when fixed-effects are included. However, it is only weakly statistically significant.

With the performance as the dependent variable in a linear relationship, the results show a positive relationship between DIR-OWNP and return on assets (ROA). This is consistent with and without firm fixed-effects. With Tobin's Q as the dependent variable, the director ownership has negative coefficient, and statistically significant, whereas institutional ownership has a very low, positive coefficient and statistically significant. Using fixed-effects, the statistical significance disappears. When market to book value is regressed on the ownership measures, the results show that no measure of ownership concentration is significant when market to book value is the dependent variable. This suggests that the selection of the performance measure requires caution, and the choice may be determined by the context and particularly the characteristics of the AIM companies.

The research also examines the non-linear relationship between company performance and the percentage of equity shares held by the directors. Following Short and Keasey (1999), this research tests for a cubic form of the relationship between company performance measures and director ownership. The model includes three variables to describe director ownership: director ownership, the square of director ownership and the cube form of director ownership. The coefficients of the director ownership variables allows to determine the turning points, unlike other studies such as Morck *et al.* (1988) who used pre-determined levels of ownership at 5% and 25%.

The addition of DIR\_OWNP square and cube form does not contribute to the hypothesis of non-linear association between corporate performance and the proportion of shares owned by board directors, that is, the ability to predict the performance of AIM companies. These results differ to those of Morck *et al.* (1988, 300) and Short and Keasey (1999, 93), who find a positive-negative-positive relationship and statistically significant for the US and UK data, respectively. With

the return on assets, as the performance measure, the signs are negative-positive-negative and are statistically significant with the square and the cube forms of director ownership. This suggests that with return on assets alignment occurs at higher director ownership levels and then entrenchment at even higher levels of ownership.

With the largest shareholder, the research uses a quadratic equation to test for non-linear relationship. In the fixed-effects model, the results show that the sign of the coefficient changes from positive to negative and is statistically significant, but the coefficients for the largest and largest squared ownership holdings are very low. Market to book value shows no relationship with the largest and the largest square ownership holdings.

*Chapter 10* - provides evidence, for the AIM companies, of the association between executive remuneration<sup>3</sup>, company performance and ownership structure, after controlling for company specific determinants for remuneration and performance. The sample consists of 197 AIM companies over the period 2008 to 2010. The results of the hypothesis show that regression of CEO's remuneration (CEOPAY) on TQ has a positive and significant coefficient (ROA shows no association). The return on assets (ROA) as an accounting measure of performance shows no relationship with the CEO pay. Company size (measured either as the natural logarithm of total assets or market capitalisation) is consistently positively associated with different measures of executive pay. The following control variables: separate roles of the CEO and Chair and presence of the founder member on the board have a positive coefficient and statistically significant with CEOPAY, whereas cash holdings, leverage, capital expenditure and board size show no correlation with the inclusion of fixed-effects.

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<sup>3</sup> In this thesis, the UK terminology, 'remuneration' and the US term, 'compensation' are interchangeable with the more generic, 'pay'.

Ownership as a governance mechanism works to align CEO, director and shareholder interests through CEO remuneration. The results show that with CEO shareholdings and director shareholdings the coefficient is negative and statistical significant without fixed-effects. With the inclusion of the fixed-effects, there is no association between CEOPAY and CEO ownership, whereas the director ownership gives a positive and statistically significant association. Institutional shareholdings have no impact on the CEOPAY. Yet, with the inclusion of ROA and fixed-effects, the correlation between CEOPAY and the level of institutional shareholding is negative and statistically significant.

### **Part Three: Conclusions**

*Chapter 11* - The final chapter sets out the answers to the research questions identified in Chapter 1, summarises the main findings of the research, identifies and discusses limitations, and suggestions for further research.

## CHAPTER 2      DEFINITIONS OF CORPORATE GOVERNANCE

### 2.1: Introduction

This chapter's objective is to review the definitions with a view to identifying which definition to use in the thesis. The main goal of this chapter is to review the corporate governance definitions with a view to identifying which definition to use in the thesis and to provide an understanding of commonalities and differences in definitions. The chapter introduces a range of corporate governance definitions, predominantly from an academic perspective, which sets forth the scope of the issues for the Alternative Investment Market companies that this thesis discusses. Even though corporate governance has generated voluminous literature in the last two decades, there is still no universally accepted definition of corporate governance. In the governance literature, where the definition of corporate governance does exist, an ideal definition is a controversial issue, but the authors focus is on the traditional relationship between the managers and the shareholders as a narrow scope or the use of other stakeholders as a wide scope definition of corporate governance. One of the most widely cited definition of corporate governance is that of Cadbury (1992, s2.5): *the system by which companies are directed and controlled*'. The Cadbury definition has proved remarkably enduring, repeatedly cited in the corporate governance literature. The Cadbury definition is the one, which is, used by codes of best practice provided by the Organisation for Economic Co-operation and Development (OECD) and the UK Corporate Governance Code 2012.

Over the last few decades, corporate governance has received a huge amount of attention. This is due to corporate scandals and financial crisis and these events have challenged conceptions and theories of corporate governance (Conyon *et al.* 2011a). Examples include the East Asia economic crisis of 1998, corporate governance scandals of Enron and WorldCom in the United States, Parmalat, Ahold and Vivendi in Europe and the recent global financial institutions failure of 2008-2009 leading to systemic failures. The corporate failures have been blamed on the presence of poor or bad corporate governance (Claessens and Yurtoglu 2013, 2). This has led to the development and reforms in corporate governance, globally.

These corporate failures have highlighted similar issues relating to the role of boards of directors, auditors and external regulation. International institutions such as the OECD have helped develop the adoption and reforms in corporate governance worldwide. The OECD principles are non-binding, as is the case for the UK corporate governance code. However, both are effective due to their status as best practices.

The rest of the chapter structure is as follows: the chapter looks at corporate governance beginning by looking at the historical development of the two terms corporate and governance in section 2.2. Against this theoretical and conceptual background, section 2.3 considers various definitions from academics as well as policy makers. Section 2.4 concludes.

## **2.2: What is Corporate Governance?**

The origins of the words ‘corporate governance’ can be traced first to the ancient Greek and Latin. The word ‘corporate’ comes from the Latin word ‘corporatus’ past participle of ‘corporare’ to form a single body derived from the word corpus meaning body. Hence, a corporation represents a body or group of people that acts as a single entity. The general concept is ‘*governance*’, which originated from Latinised Greek, ‘*gubernatio*’, meaning management or government, which in turn comes from the ancient Greek, ‘*kybernao*’, which suggest to steer, to drive, to guide, to act as a pilot (Clarke 2007b). The similarities to the above are seen in the definition of corporate governance provided by Zingales (1998) who describes governance as the exercise of authority, direction, and control.

Kay and Silberston (1995, 86) emphasise a direct comparison of a corporation’s governance system with ‘entrenched political structure’ and suggest that both systems show similarities, for instance, the self-perpetuating nature of the managerial/governing elite, and the appointment of new members based on the existing elite’s own criteria. Succession of leaders is internal and orderly, but also could be a result of a hostile takeover of a corporation or government. The election of directors and re-election of the incumbents using a majority vote ensures accountability. Weiss (2000) provides a range of different definitions of

'governance' quoting various international institutions such as the World Bank and OECD and finds that the definition of governance varies substantially. His article suggests a conflict between the practitioners' use of '*governance*' as an illustration of a complex set of structures and processes, both public and private, and its alternative use with '*government*' or '*politics*'.

According to Krahmman (2003, 325) governance can be categorised in four ways: as a generic group synonymous with the political system, reform of public administration referring to the local council, policy sectors such as education and health and the final group consist of corporate governance. This challenges the definition of governance as a generic synonymous with concepts such as the political system. As such, the use of corporate governance is seen as a sub-set of the wider term governance. One could argue that different components of corporate governance can be associated with the general concept of '*governance*', yet corporate governance has grown to create its own discipline. When it comes to analysing corporate governance, it can include all organisational types, such as limited liability companies (both public and private), profit making or not for profit making. However, academic research on corporate governance tends to focus on limited liability companies that trade on a stock exchange. Corporate governance is used as guidance to ensure that objectives of the manager and the shareholders are aligned, but also that they are compliant with all regulatory requirements. Corporate governance is manifested by rules from the corporate governance codes or national jurisdictions, structures (for example, the board committees), systems (for example, the outsider or insider systems), procedures (for example, detailed instructions), and practices.

Becht *et al.* (2003), attribute the first use of the term Corporate Governance to Eells (1960, 108) in his book, '*The Meaning of Modern Business*', where it suggests that corporate governance indicates the structure and functioning of the corporate as a political entity. Jensen and Meckling (1976)'s work on the conflict of interest between the management and the shareholders began the discourse on corporate governance. Sir Adrian Cadbury in the review on Bob Tricker's book on corporate governance states that he regards Bob Tricker as the '*Father of Corporate*

*Governance*' since his 1984 book on corporate governance. Since then, I have spoken to several key authors in UK, at a Conference in 2014, who confirm that Tricker popularised the term Corporate Governance.

Many academic articles do not define corporate governance. Such authors often quote one of the definitions set out in Table 2.1, but some authors do not even provide a definition at all. It may be that these authors believe corporate governance to be a well-defined concept understood by potential readers. However, this seems to be contradicted by the variations within the definitions of corporate governance (see Table 2.1). This making it difficult to describe what corporate governance is. This makes one believe that the definition of corporate governance is still vague and fluid. Although 'corporate governance' a phrase that regularly appears among the academics, business groups, media and politicians, it is difficult to generalise what corporate governance is. The next section considers several definitions both from an academic and institutional perspective.

### **2.3: Review of Various Definitions of Corporate Governance**

A search using academic textbooks, internet and peer reviewed articles on corporate governance show various alternatives for the definition of corporate governance as shown in Table 2.1. One view is that the corporate governance implies a broad ranging process of rules and practices relating to the corporation's direction and control. Table 2.1 shows a diverse collection of corporate governance definitions and reflects the growing interest in the system that management uses to discharge their accountability and to represent the interests of the shareholders. The table sorts definitions by date of publication, which suggests the possibility of development through time, with later authors reflecting the definitions of earlier authors. The merit in using this format would provide a basis for understanding the level of generality of the definitions, and how far do they 'flesh out' what the author thinks of as good corporate governance. For example, the Cadbury (1992) definition is a very general and straightforward with a focus on control. The first sentence of the OECD (1999) definition on corporate governance repeats the Cadbury (1992) definition, but the second sentence expands on this, hence is more detailed,

describing specific functions and the potential to development of hierarchical definitions.

Some definitions provide an identification of relevant parties. However, the details, for example, as to who are the stakeholders referred to, which is not always stated and left to the interpretation of the reader. The consensus is that the narrow view focus is of owners versus managers (mediated by board of directors); in contrast, the wider view is of all legitimate stakeholders.

**Table 2.1: Examples of Corporate Governance Definitions**

<i>Author</i>	<i>Definition</i>	<i>Comment</i>
Cadbury (1992, 5)	A system by which companies are directed and controlled.	Setting the direction in which to steer the company. Broad/open ended.
Demb and Neubauer (1992, 9)	Process by which corporations are made responsive to the rights and wishes of stakeholders'.	Deals with the issue of corporate accountability.
Shleifer and Vishny (1997, 737)	The ways to which suppliers of finance to corporations assure themselves of getting a return on their investment.	Corporation's objective is to maximise the returns to the shareholders and the debt holders; implies performance.
Turnbull (1997, 180)	All the influences affecting the institutional processes, including those for appointing the controllers and/ or regulators, involved in organizing the production and sale of goods and services. Described in this way, corporate governance includes all types of firms whether or not they are incorporated under civil law.	Description allows the inclusion of all types of companies under any legal regulation. Avoids the defining of firm or its boundaries.
Zingales (1998, 499)	A complex set of constraints shaping ex- post bargaining over the quasi rents (profits) generated by the firm .	Relates to both the determination of the value added by firms and the allocation of it among stakeholders. Claessens (2006, 4) refers to its as a set of rules and institutions.
Berglöf and Thadden (1999, 11)	A set of mechanisms that translate signals from product markets and input markets into firm behaviour.	Broader than the traditional focus on the investors and top management.
OECD (1999)	System by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as, the board, managers, shareholders and other stakeholders, and spells out the rules and procedures for making decisions on corporate affairs.	Relating to structure for setting a company's objectives. Definition is consistent with that provided by Cadbury (1992).

<i>Author</i>	<i>Definition</i>	<i>Comment</i>
Wolfensohn (1999) <sup>4</sup>	Corporate governance is about promoting corporate fairness, transparency and accountability.	A well governed company should exhibit the characteristics mentioned in the definition by Wolfensohn.
Cadbury (2000)	Holding the balance between economic and social goals and between individual and communal goals. The corporate governance framework is there to encourage the efficient use of resources and equally to require accountability for the stewardship of those resources. The aim is to align as nearly as possible the interests of individuals, corporations and society.	Refers to sustainability and organizations within a broader socio-economic system. Focus on stewardship.
Johnson <i>et al.</i> (2000, 142)	Effectiveness of mechanisms that minimise agency conflicts involving managers, with particular emphasis on the legal mechanisms that prevent expropriation of minority shareholders	Importance of the legal protection of the minority shareholders.
Denis and McConnell (2003)	A set of mechanisms, both institutional and market based, that induce the self-interested controllers of a company to make decisions that maximise the value of the company to its owners, that is, the suppliers of capital.	Has similarity with that of Shleifer and Vishny, that is, relates specifically to the provision of finance.
Chew and Gillan (2005)	Investors are assured by a combination of both corporate procedures and financial institutions that professional managers will make efficient use of their capital.	Suggests the difficulties that financiers may have in assuring that their funds are not expropriated or wasted.
Monks and Minow (2006)	Risk for investors, whose interests may not be protected by ineffective or fraudulent managers and directors, and risk for employees, communities, lenders, suppliers and customers. They further suggest that corporate governance is a structure, that is, intended to ask the right questions and that checks and balances are in place to ensure that the answers reflect what is best for the creation of long-term sustainable value.	Relationship between stakeholders to determine the direction and performance of the corporations.
Larcker <i>et al.</i> (2007)	Set of mechanisms that influence the decisions made by managers when there is separation of ownership and control.	Common relationship between principal and agent in a firm run by professional managers.
Walker (2009, s1.1:19)	The role of corporate governance is to protect and advance the interests of shareholders through setting the strategic direction of a company and appointing and monitoring capable management to achieve this.	Narrow definition focused on shareholder orientation.

<sup>4</sup> quoted in the Financial Times, June 21, 1999, cited in Macey (2008)

<i>Author</i>	<i>Definition</i>	<i>Comment</i>
Solomon (2010)	System of checks and balances, internal and external, which ensures that companies discharge their accountability to all their stakeholders, and, act in a socially responsible way in all areas of their business activity.	Suggesting a system of checks and balances extending the boundary to all stakeholders.
Tricker (2012, 4)	The way power is exercised over corporate entities. It covers the activities of the board and its relationships with the shareholders or members, and with those managing the enterprise, as well as with the external auditors, regulators and other legitimate stakeholders	The governance role is not concerned with the running of the business of the company per se, but with giving overall direction, with overseeing and controlling the actions of management and with satisfying legitimate expectations of accountability and regulation beyond the corporate boundaries’.

Solomon *et al.* (2000) cited in Solomon (2010), use a survey questionnaire on UK institutional investors to assess the users’ attitude to the relative importance of various definitions. They follow specific themes relates to corporate governance functions, which include accountability to stakeholders, corporate success, direction and control, financial perspective, regulatory shareholder activism, and shareholder orientation. Solomon (2007) view of corporate governance definitions is as aligning between two extremes, which they characterise as the narrow and a broad view. The former is limited to the relationship between the management and the shareholders, whereas the latter is inclusive and extends the boundary between the management and the shareholders to include other stakeholders.

The OECD, the World Bank, the European Association of Securities Dealers (EASD) and the European Commission, have adopted in spirit a broader definition. For example, the EASD states in its principles and recommendation on corporate governance that:

*‘Governing organs of companies cannot be held accountable to all stakeholders in the company – shareholders, staff, clients, suppliers, credit providers, as well as the communities and the environment in which they operate – lest accountability be fragmented, subjected to contradictory aims and thereby diluted. The Committee therefore espoused the view that corporate governing organs should be*

*accountable to the shareholders, the more so since they are the residual bearers of risk of the company as owners of its equity. However, company organs should also be responsible for properly addressing the concerns of other legitimate stakeholders. Such attention evidently promotes the best interests of the company itself in the long term'.<sup>5</sup>*

The above definition seems to be ambivalent, in that it suggests corporate responsibility in relation to legitimate social interests, but denies accountability for such responsibility. Therefore, it is unclear whether, in the long run, this should benefit all stakeholders, including shareholders.

Indeed, in recognition of the corporate governance definitions stated in the preceding sections, raises the question how nuanced are the definitions that the authors try to provide. For example, whether the legitimate stakeholder groups are a homogenous group, all with the same interests, or are they seen as heterogeneous. The examples for the latter would include majority versus minority shareholders, block versus dispersed shareholders, executive versus non-executive director and salaried managers versus managers with equity stakes. Bebchuk and Weisbach (2010) considers the variation between the cash flow and control rights as a common governance problem that exists between the inside majority and outside minority shareholders. Similarly, as above a more nuanced definition of corporate governance would not regard the shareholders, management and board of directors as homogenous groups with the same interests. Hence, corporate governance would deal with the conflicts of interests between the following groups or individuals: management and finance providers; shareholders and other legitimate stakeholders; and the large shareholder(s) and the minority shareholders.

The literature on corporate governance suggests various families of definitions. I have grouped them into three categories. First, regulation and practice type of definition, and financial economics. The former focuses on systems and

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<sup>5</sup> [http://www.ecgi.org/codes/documents/easd\\_cg\\_pr.pdf](http://www.ecgi.org/codes/documents/easd_cg_pr.pdf), p.2, accessed 24 May 2014

rules. Regulation can be categorised as both formal and informal rules, which could be issued by either public or private bodies. These rules may be binding on the corporations' management or will help constrain their behaviour without being binding. Public regulation includes the softer corporate governance, that is, not a legally binding form of regulation and the most common form is the 'comply or explain' concept in the UK. This approach to regulation shapes the framework in which corporate governance practices are in the UK and other countries that adopt a 'comply or explain' approach. The rules related to corporate governance may be considered as either internal or external. An example of internal rule may relate to the division of power between the CEO and the non-executive chair. The company's articles of association may explicitly state this, or may be tacit, involving renegotiation between chair and CEO whenever there is a change of personnel. An example of an external rule would be a regulation set by a regulator. As noted above, regulations may require or forbid certain practices, or may give rise to a presumption of following of the practices, which would permit companies that do not comply to provide an explanation for non-compliance. Comparative analysis may be problematic, as within a country there may be parallel systems, for example, one system for companies trading on the main stock exchange and another for the smaller private companies. This is obvious in the Alternative Investment Market, with the adoption of the UK Corporate Governance Code by some of the larger AIM companies or as a minimum requirement the Quoted Companies Alliance principles.

The financial economics type of definition focuses on aligning management decisions with interests of providers of capital. Normally, both the academics and the policy makers focus on shareholders' interests. Out of the various definitions reviewed, one of the common themes arising is that three main groups referred to include the shareholders, the executive management and the board of directors. Therefore, corporate governance can be a system of rights and responsibilities among these groups. Zingales' (1998) definition shows a shift from the rights and responsibility to a balanced approach, requiring governance systems to produce structures and incentives to allow companies to produce profits.

Second, common classification of the corporate governance definitions is to separate the families into two dichotomous groups, consisting of narrow based (shareholder) and the wider based (stakeholder) that contradict each other in the use of either the shareholder or the stakeholder as one of the participants. First, in the narrow sense, corporate governance focuses on the conflicts of interest and the need for greater transparency between the management and the shareholders and refers to internal governance structures, which include the executive management, the board of directors and the shareholders. This aligns with the Cadbury definition, by which companies are 'directed and controlled'. The focus is on the legal protection of minority shareholders and failing this, the possibility of external regulation and legislation for specific internal governance structures.

In a broader sense, corporate governance includes both internal and external governance structures. This may include all possible legitimate participants (groups/individuals) involved with the corporate entity. The external structures include the legal systems, the regulatory system, political, cultural and socio-economic institutions within which the companies operate. This dimension of corporate governance focuses on the legitimating of companies within society. In light of this, corporate governance is often about balancing the rights and interests of internal and external stakeholders. Therefore, corporate governance can also be a structure, which helps resolve the conflicts of interests among stakeholders (see figures 3.1 and 3.2). Jensen *et al.* (2004) suggest that a firm cannot maximise its value if it ignores the interest of its stakeholders. Perhaps the broader inclusion of all stakeholders' interests is an ethical issue for these companies; however, the thesis does not consider the wider stakeholder group for analysis.

Although corporate governance is now a global concept, interpretations of what it means are still ambiguous. The ongoing nature of corporate governance is indicated by the definition of the Commission on Global Governance (cited in Clarke 2007a, 2; Weiss 2000, 797):

*'A continuing process through which conflicting or diverse interest may be accommodated and cooperative action may be taken. It*

*includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest.'*

Third, using Claessens and Yurtoglu (2013) study, where they categorise the definition of corporate governance into a set of behavioural patterns of companies who categorise the definition of corporate governance into a set of behavioural patterns of companies and a normative framework. Within a set of behavioural patterns of companies and measures, include *'performance, efficiency, growth, financial structure and treatment of shareholders and other stakeholders'*. The definition that concerns with normative framework includes rules, *'the legal system, the judicial system, financial markets and factor (labour) markets'*. For studies at company level, the behavioural pattern of companies' definition seems more appropriate. It considers such matters as adoption of the board structure and its function, the role of executive compensation in determining company performance, and the role of various groups of shareholder ownerships. For comparative studies at country level, the second definition is a more logical one. It investigates how differences in the normative framework affect the behavioural patterns of companies and investors.

In a comparative review, the question arises how broadly to define a framework for corporate governance. Under a narrow definition, the focus would be only on the rules in the capital markets governing equity investments in publicly listed firms. This would include listing requirements, insider dealing arrangements, disclosure and accounting rules and protections of minority shareholder rights. In order to clarify the distinction between corporate governance regulation and mechanism the next section provides some examples. Examples of corporate governance regulation include securities and capital market law, disclosure rules, company law, take-over regulation, labour laws such as Germany's co-determination, and international accounting standards. Examples of corporate governance mechanisms include the bank or market based financial systems, shareholder protection rights and disclosure of information for financial reporting.

For the AIM companies, which are the subject of this research, considering the nature and characteristics of the companies that they are new and more simply structured in comparison with the large listed companies on the LSE main market, the narrow definition of the shareholder view is more appropriate. Hence, the corporate governance for the AIM companies focus is primarily on the conflicts of interest and the need for greater transparency between the management and the shareholders and refers to internal governance structures.

Interestingly, the definition of corporate governance used by the Quoted Companies Alliance guidelines suggests that '*corporate governance is a code of behaviour expressing how management teams in companies, act and are organised (governed) to both create and protect value on behalf of the shareholders*'. This definition closely relates to that of Claessens and Yurtoglu (2013).

This chapter considers several different definitions of corporate governance from policy documents to academic researchers. The use of various definitions suggests that there is no universally accepted definition of corporate governance, but different definitions analyse specific aspects and each one appropriate in different circumstances. It is possible to draw out some common characteristics, which include actors, rules, structures, systems, procedures and practices, at least in part, which suggest that, although conceptualised in different ways, corporate governance may be understood as a general phenomenon. Based on the various definitions reviewed in this chapter, suggests that the common themes arising from the academic authors are to separate corporate governance into either of the two classifications: narrow or broad view. Several authors have criticised the one-dimensional shareholder based definition, yet interestingly, policy documents such as the Cadbury Report (1992) and Walker Report (2009, 23) focus on shareholders' interests, i.e. the narrow definition.

## **2.4: Conclusion**

The main 'goal' of this chapter is to review the definitions with a view to identifying which definition to use in the thesis. The thesis explores empirically the

relationship between corporate governance and company performance at company level for the smaller quoted AIM companies. The corporate governance definition for this PhD is that of Shleifer and Vishny (1997). It allows for the primary objective of the organisation to produce returns for their investors. From a financial perspective, this definition focuses on the shareholders and maximisation of the shareholders' return. It further acknowledges the interdependent interests of the different parties involved.

Looking at the 'families of definition' in points above seems that the theoretical frameworks adopted, explicitly or implicitly, by the authors heavily influence the definitions available. Indeed, the financial economists tend to adopt agency theory to explain corporate governance issues, whereas the 'wider view' definitions are often grounded in a broader stakeholder theory approach. Cohen *et al.* (2010), from the auditors' perspective, suggest that the two theories that assist in understanding the role of corporate governance include agency theory and institutional theory. Chapter 3 explains the common theories used in explaining corporate governance in more depth.

## **CHAPTER 3      CORPORATE GOVERNANCE THEORIES**

### **3.1: Introduction**

This chapter's objective is to review and provide an understanding of key theoretical approaches to corporate governance and to assess the application of agency theory for companies listed on the Alternative Investment Market (AIM). Chapter 2 considered the various definitions available for corporate governance. According to the conclusion, in Chapter 2, suggest that the theoretical framework adopted, heavily influence the definitions available. Researchers, whose interests have extended beyond the more commonly cited agency theory have looked at other disciplines such as organisational behaviour and sociology (Eisenhardt 1989, 57). These theories include, for example, transaction cost economics and institutional theory (both of these theories are considered later in this chapter). The study of corporate governance and its development in terms of a single theory risks overlooking important linkages, parallels and contrasts among the different theories. While agency theory seems to be the most popular theory used by researchers in explaining corporate governance and firm behaviour, it is important to look at the other theories, which shows diversity of corporate governance. The other theories discussed in this chapter include stakeholder theory, stewardship theory, institutional theory, class hegemony and managerial hegemony. Furthermore, as Turnbull (1997, 181) suggests that restricting the study of corporate governance to publicly traded companies reduces the more efficient institutional arrangements for productive activities. Hence, the study of corporate governance and the relevant theories are also important in the context of the AIM companies. Table 3.1 gives a summary of these theories.

**Table 3.1: Summary of Theories in Corporate Governance**

<b>Theory</b>	<b>Focus</b>	<b>Governance</b>
Agency theory	Principal-agent relationships	Governance mechanisms to protect shareholder' interest; minimize agency costs
Transactional cost economics	Allocation of governance to distinct transactions	'Governance structure' – minimize transaction costs
Stewardship	The long term interests of the principal are put above the individual's self	Corporate governance structure enables high authority discretion-

<b>Theory</b>	<b>Focus</b>	<b>Governance</b>
	interest (Hernandez 2008)	organisational rather than self-serving objectives
Stakeholders	Rights and responsibilities to stakeholders	All inclusive approach to governance –How do we prioritise different stakeholder groups?
Legitimacy	Society confers legitimacy upon an organisation	
Institutional	Isomorphic pressure forces homogeneity among organisations	Substance is the relations between governance groups and the use of game play to maintain their form to all relevant groups(Cohen et al. 2008)
Class hegemony	Directors seen as the elite	Interlocking directors
Managerial hegemony	Management is powerful and weakens the influence of the directors	Board is under the influence of the management and is not acting with the shareholders’ interest in mind (Cohen <i>et al.</i> 2008)

The reasons for the existence of firms, and what a firm is are necessary for the understanding of corporate governance. Hence, an understanding of the theory of the firm may be able to provide reasons for the organisation of firms, the relationships within the firm and that between the firm and the society. The next section discusses the theory of the firm.

### **3.2: Theory of the Firm**

The theory of the firm traces its existence back to Coase’s (1937) article, ‘The Nature of the Firm,’ with its key explanation on the firm’s existence, boundaries and internal organisation that can be explained by integrating the ‘cost of using the price mechanism’ for economic analysis. However, Coase’s seminal work was neglected for over three decades, but, since the 1970s, the theory of the firm began to emerge. According to Foss and Klein (2005) the key areas of contribution that emerged in the 1970s on the theory of the firm include Williamson’s transaction cost economics, property rights and nexus of contracts (Alchian and Demsetz 1972) and agency theory (Jensen and Meckling 1976). Following from the Jensen and Meckling’s paper, this section will focus on property rights and agency to understand ownership structure. However, other key theories need to be reviewed.

Literature on property rights assists in understanding the determinants of corporate share ownership structure, which emphasises the norms, law and legal

systems in structuring the property rights and the governance systems. This suggests that share ownership holdings as a property right arrangement through which the owner is entitled to the following: owner's decision making to deploy corporate assets, owner has right to earn income, has cash flow rights, and finally has the right to transfer the shares to another group or individual.

Traditional theories focused on the firm as a single unit of decision-making, managed by the owner himself. The evolution of the corporate form of business organisations has resulted in ownership by a large number of shareholders. A consequence of this is the separation of ownership from management. Berle and Means (1932) suggest a growing separation between ownership and control within large companies in the United States. Berle and Means, which is the most cited work<sup>6</sup> in corporate governance is famous for the phrase, '*separation of ownership and control*'. Thus, where the shareholders are the residual claimants, but do not benefit from the rights of control, the control rights are granted to the managers. Boatright (2006, 113) defines shareholders as any group that are the '*providers of equity capital*' and have the rights to control and to receive the profits of a company. Managerial theories of the firm, developed by Baumol (1962); Marris (1963); Williamson (1964) suggest that the firm's managers want to enhance their own utility and consider the implications of this for firm behaviour compared to the profit-maximising view. Baumol suggests that managers' interests are best served by maximising sales after achieving a minimum level of profit to keep the shareholders quietly satisfied and happy. Beyond this level, the profit is traded-off to increase the utility of the management.

Simon (1979, 502-503) suggests that an alternative to classical theory is the bounded rationality. Bounded rationality refers to the ability of stewards to align their interests with those of the organisation, as well as limits to the ability of owners to evaluate effectively the behaviour of the stewards (Chrisman *et al.* 2013, 2). Managers will accept alternatives, which are not optimal, but those that provide

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<sup>6</sup> Cited by 12,224 on Google Scholar accessed 14 September 2013

satisfactory choices. Simon calls this ‘satisficing’, where managers set their own objectives and actions, moving away from the maximisation of shareholder value concept and instead select an alternative that meets their own ambition. More recently, this has led to the rise in ‘principal-agent’ analysis on problems of contracting with asymmetric information. The asymmetric information has become a widely acceptable concept among academics that a principal (for example, a shareholder) cannot costlessly deduce how an agent (manager) is behaving. It may arise because the agent has either greater expertise or knowledge than the principal, or because the principal cannot directly observe the agent’s actions. It is asymmetric information, which leads to a problem of moral hazard (described later in s.3.3).

March (1962, 672) provides an alternative to the classical economic theory on the behaviour theory of the firm where he suggests that a firm is a ‘political coalition’. A coalition existing between different individuals and groups of individuals in the firm and these groups each having different goals and possibly in conflict. Each individual/group will have their own goals which will conflict and make it difficult to achieve consistent goals (Augier and March 2008, 3).

Penrose (1959) interest in growth of the firm, considers the firm to be an administrative entity, with the control over potentially valuable resources. Penrose (1960, 3) suggests that the shift from the traditional owner run organisations to the professionally managed firms enables managers of the firm to make decisions about the firm’s activities and resources been deployed to allow the firm’s diversification. Penrose discusses the growth of firms measured in terms of fixed assets. This measure has its own disadvantages and there is no overwhelming reason for choosing this measure rather than another. She suggests that the use of total assets may distort the size of the firm, as a productive unit because it includes the purchase of investment outside the firm,<sup>7</sup> which is large simply because the firm is unable to expand its productive operations fast enough to make full use of its cash resources.

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<sup>7</sup> Joan Robinson 1956, *The accumulation of Capital* (London) Macmillan, called this ‘placements’ which denote the purchase of titles to debt and shares

Previous literature on managerial capitalism has been concerned with the above issues since Berle and Means argued that while shareholders had legal control of the US corporations, it was management, in fact that exercised effective control. As holdings in large companies became more and more dispersed, and the individual shareholders having claims on very small fraction of the organisation had no influence on corporate policy and decision-making. The board is presumed to represent the shareholders and has formal control over management, but top executives are responsible for appointing the board and may use them as a vehicle to legitimise decisions that may not be in the best interests of the owners, that is, management dominates the board (see Mace 1971, Herman 1981). In settings where managers are not subject to external constraints, managers have discretion to pursue own objectives, even when these come into conflict with those of shareholders (Williamson 1964; Marris 1964).

Jensen and Meckling (1976) look at the theory of the firm from the relevance of agency costs and ownership structure. They begin their explanation from an owner-managed firm and extend this to the economic implications of the separation of ownership and control. Jensen (1983, 325) argues that in economic literature of 'theory of the firm' it is not the positive theory of the firm, but to a certain extent a theory of the markets in which firms are important actors. From this perspective, the firm can be viewed as a black box that responds to input and product markets to achieve value or profit maximisation.

Jensen and Meckling (1976) define an organisation as a legal entity that serves as a nexus of contracts both explicit and implicit among disparate individuals (p. 310). The nexus of contract meaning is complicated because a contract means an agreement, whereas, in law, the term contract means a legally enforceable promise. In reality, the nexus of contract does not mean either agreements or legally enforceable promises. Therefore, a better meaning would be to use '*nexus of reciprocal arrangements*' (Eisenberg 1998, 822).

Conventional economic models explain firms' decisions in terms of market control: when markets work, the control exchange relationships ensure that the

parties act efficiently. However, markets fail to discipline managers in large firms, for two reasons. First, the assumptions underlying effective market control for managerial behaviour such as, large numbers, accurate information, mobility of resources and widely-dispersed power are very stringent and hardly met (Grandori 1987). Secondly, the control of many of the largest firms is not in the hands of the owners, but with managers (see Williamson (1964); Mizuchi (1983)) and these two groups have most likely different interests. Owners' interest will be in maximising firm performance, whereas managers' objectives may diverge from the owners, for example, increasing the size of the firm. Since, this PhD is about companies quoted on the Alternative Investment Market, characterised as small firms, it is likely, that the ownership and control in some AIM companies, are in the hands of an individual (likely to be founder) or concentrated blockholder. The latter could be an individual or an institutional shareholder. Hence, the founder or powerful blockholder is able to exercise influence on the way the company pursues its objectives. This contrasts the UK and the US large firms listed on their main stock exchanges, where owners are widely dispersed, and have little control over the firm's activities and hence characterised as management controlled.

Morck (2006, 3) suggests that the normative view of a corporation is that it should be run to maximise shareholder value, which is derived from economists' view that firms maximise profits. In neoclassical economic theory, a firm that maximises the present value of all its expected future economic profits maximises the market value of the shares. This follows from economists' perspective that the corporation is a nexus of contracts, with the shareholders the residual claimants of the firm's cash flow (Fama and Jensen 1983b). According to Hart (1995, 680) due to transaction costs, comprehensive contracts cannot be written, and hence agency problems will be an issue, which suggests that the governance structure has a role. The next section discusses the various corporate governance theories that have been influential in the development of corporate governance.

### 3.3: Agency Theory

Agency theory emerged from the seminal papers of Alchian and Demsetz (1972) and Jensen and Meckling (1976). Academic literature on agency theory spans a diverse range of disciplines (see Eisenhardt 1989, 57 for more details). From a financial economist's perspective, corporate governance deals with agency problem that arises from the conflicts of interests between managers and shareholders (Hart 1995 cited in Ishak and Napier 2006, 87). Daily *et al.* (2003) suggest the predominance of agency theory in corporate governance literature, is due to the simplicity of the theory in using two participants, managers and shareholders, within a corporation, and second reason is that the humans are self-interested and unwilling to sacrifice own interests for the sake of the interests of the others.

Agency theory explains the relationship in which one party (the principal) delegates the work, which another party (the agent) undertakes (Jensen and Meckling, 1976, 308). However, the principal-agent relationship is broad and can exist between any two related parties; for example, this principal-agent relationship can be between a large shareholder and minority shareholders. The theory argues that the agency problems arise under conditions of incomplete information or information asymmetries, which characterise most business settings. In the literature, two aspects of agency problems discussed are adverse selection and moral hazard. Adverse selection is the pre-contractual problem of information asymmetry under which the principal cannot ascertain if the agent's selection accurately represents his ability to do the work for which he is paid (Cuevas-Rodríguez *et al.* 2012, 540). Moral hazard is a post-contractual condition under which the principal cannot be sure if the agent has put forth agreed effort or may be shirking (Eisenhardt 1989, 61; Cuevas-Rodríguez *et al.* 2012). Fong and Tosi (2007) explain that due to information asymmetry it allows the agent to misrepresent his or her ability to the principal (that is, adverse selection) and or shirk (that is, moral hazard). Presence of information asymmetry may exacerbate the agency problem.

The problems of adverse selection and moral hazard are exacerbated, for example, when fixed wage contracts are used and; therefore, this is not always the optimal way to reduce conflict between the principals and agents (Jensen and

Meckling, 1976). Eisenhardt (1989) argues that fixed wage leads an agent to shirk since the agent's compensation will be the same anyway, thus ignoring their performance or effort level. Alchian and Demsetz (1972, 781-785) suggest where there is potential for the agents to shirk, it is more efficient to use remuneration based on residual claim (equity) on the profits of the firm or a way to reduce shirking would be to put in place someone to act as a monitor. For the AIM companies it is more likely, that the management have cash remuneration and very few companies will have their salary made up of equity shares.

Within the economics discipline, the principal-agent relationship under conditions of incomplete and asymmetric information results in conflict. This suggests that the equity shareholders are vulnerable since they are the residual claimants, that is, their return depends on after all other contractual claims have been satisfied (Shleifer and Vishny 1997). Fama and Jensen (1983a, 328) use the term '*residual claimants*' for those who bear the residual risk for the rights to net cash flows. For the AIM companies, the minority shareholders will be vulnerable for the reasons mentioned above.

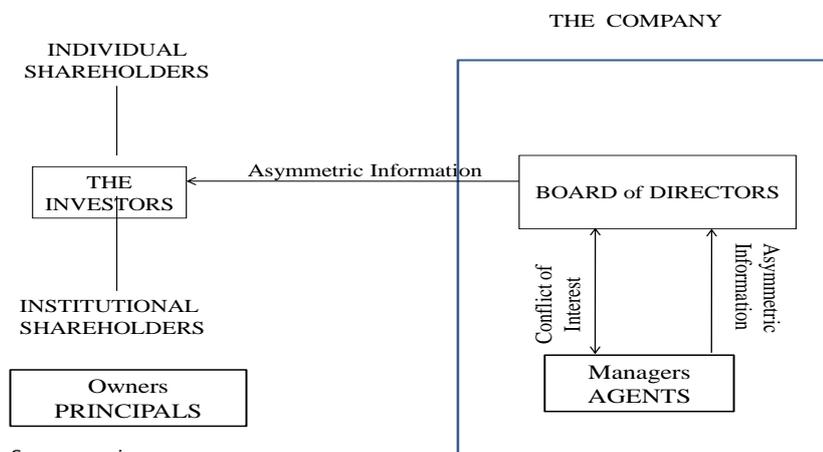
The separation of management and ownership in an agency contract can lead to a situation of control without risk bearing in the large listed firms (Berle and Means 1932; Alchian and Demsetz 1972; Jensen and Meckling 1976). This risk exacerbates when ownership is dispersed, which make effective coordination amongst shareholders difficult and expensive, making the managers the de facto policy makers (Marris 1964; Williamson (1964, 1985).

In an ideal situation, one would expect that managers would sign a complete contract with the principals specifying all the functions of the managers and allocation of profits. Since, future contingencies are difficult to envisage, it is not, practical to write complete contracts, and even if it were possible, it would not be cost effective. Because of agency problems in designing the contracts, the manager and financier have to allocate residual control rights (Shleifer and Vishny 1997,

741). Grossman and Hart (1986, 697) suggest that the residual control rights are rights to make decisions in circumstances not foreseeable by the contract.

Empirical studies in agency theory have followed two main themes: principal-agent relationship and positivist agency theory, which share common assumptions, for example, the unit of analysis as a contract between the principal and agent. According to Eisenhardt (1989, 59, 68), research that flows from the positivist agency theory specifically focus on the relationship between the owners and managers of companies (see Figure 3.1). Positivist researchers determine situations where the agent and principal have differing interests, and then examine how an agent's self-serving behaviour can be restricted using governance mechanisms. However, the principal-agent researchers are more concerned with the effectiveness of contracts within different circumstances of uncertainty and risk. The focus is broader and applies not only to owners and managers of companies, but also to other relationships such as employer and employee, whereas the positivist literature focuses exclusively on the principal-agent relationship between the owners and managers (p.59). Given that both the positivist and the principal-agent relationship are formed under the same legal form, hence their governance structures would present broadly similar structure, but differ in the substance of governance structures. The two agency theories are shown schematically in Figures 3.1 and 3.2.

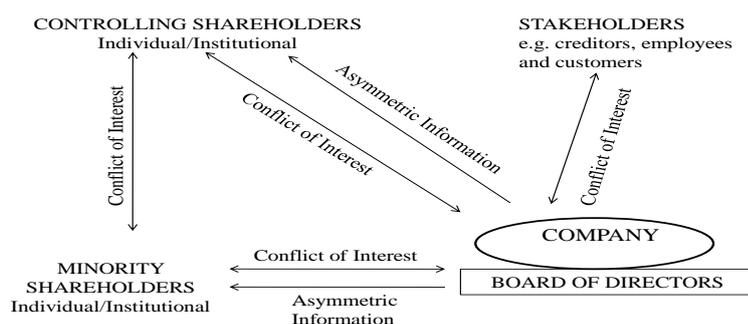
**Figure 3.1: Model of Corporate Governance Between Owners and Managers. Focus of Positivist Agency Theory Researchers**



Source: various

Berglöf and Claessens (2004) state that one of the solutions to corporate governance problems is to have highly concentrated shareholdings, where large block holders can monitor the management. Hart (1995, 678) suggest that agency problem, or conflict of interest, involves different members of a company, and this will include owners, managers and stakeholders. Figure 3.2 shows diagrammatically agency problems that can exist between different groups: first, conflict between the firm's owners and the managers; second, conflict between owners that have a majority or controlling share ownership in the company and the minority shareholders; and third, conflict between the firm and other groups besides the shareholders, (for example, creditors, employees and customers)

**Figure 3.2: Wider Principal-Agent Relationship**



Source: Various

To prevent expropriation by the agent, the shareholders will incur agency costs. Agency costs arise with the separation of the ownership and control concept. According to Jensen and Meckling (1976, 308-309), agency costs include monitoring costs, bonding costs and residual loss. Monitoring costs are costs that the principal suffers to restrict the agent's activities. Bonding costs are those costs incurred by the agent to ensure that the principal is made aware of their commitment. The last cost is when the principal will incur partial loss on her welfare is termed residual loss. Therefore, how do we reduce these agency costs? Agency theory specifies mechanisms that can reduce agency costs (Eisenhardt 1989). Following are some examples of mechanisms to limit agency costs: provision of financial incentive schemes to managers for maximising shareholder interests; Grossman and Hart

(1982) theorise that higher financial leverage reduces agency costs. They argue that management can use debt to self-discipline themselves to avoid threat of liquidation. If managers do not maximise profits, the chances of going bankrupt increases, together with managers' loss of job, reputation and perquisites. It is in the shareholders' interest for management to issue debt along with equity. Shleifer and Vishny (1986) suggest that institutional shareholders will act as a monitor for the managers; Jensen (1986) suggests that the high leverage compels managers to generate cash flow for payment of the cost of finance; Morck *et al.* (1988) suggest that increasing insider ownership will reduce agency costs, but maybe reversed at very high levels of insider shareholdings.

Agency theory has been criticised as been ineffective, for example, Daily *et al.* (2003); Sundaramurthy and Lewis (2003), suggest that the methods for mitigating agency problems such as monitoring, pay for performance, corporate control by hostile takeover have been found to be ineffective.

Since, this thesis is about the AIM companies, it is important to link agency theory within the context of AIM. For the AIM companies, agency theory is important for several reasons. AIM companies, are generally new ventures, small and have limited resources. One of the contributions from the agency theory is that the board of directors are the monitors of executive behaviour and the board should align the interests of the shareholders' interests to those of the management, and hence compensation is more likely to be based on individual characteristics rather than company performance measures. Considering the nature of the AIM companies, some of these companies have uncertain long-term futures and more prone to higher risks in the environment and thereby generating low profits. Such risks arise from bankruptcy, changes in technology, new competitors and changes in institutional regulations such as the European Union Directives.

Agency theory, conceptualised by Alchian and Demsetz (1972) and Jensen and Meckling (1976) views the firm as a nexus of contracts, both explicit and implicit. Within a principal-agent perspective, the sole residual claimants to income

are the shareholders. In this approach, the firm's goal is to maximise shareholder wealth and the managers have a fiduciary duty as agents for the principals (Klein *et al.* 2012). One of the methods of reducing agency costs is to increase share ownership of shareholders. Chapters 8, 9 and 10 empirically investigate the impact of different share ownerships on company performance for AIM companies. An alternative to agency theory is transactional cost economics, described in the next section.

### **3.4: Transactional Cost Economics**

The general hypothesis of '*transactional cost economics*' (TCE) suggests that institutions are transaction minimising arrangements that may be attributed to the Darwinism principle. Coase (1937) led the way to the development of TCE in his article, 'the Nature of the Firm,' in which he argued that market exchange is not costless and that transaction costs can explain both the existence of firms and their optimal size. Coase (1937) suggests that there are benefits for the firm, if it commits to transactions internally rather than externally, where the management directs and controls production, thereby lowering the transaction costs. The transaction cost approach regards the transaction as the basic '*unit of analysis*'. Coase explains that firms emerge to economise on the transaction costs of market exchange and that the boundary of a firm or the extent of vertical integration depends on the scale of these costs. Vertical integration, or the '*make-or-buy*' decision, has been described as a '*paradigm problem*' of TCE (Williamson 2007). Examples of vertical integration include integration from manufacturing into distribution in sectors such as tobacco. Coase further emphasises the role of transaction costs in the organisation of firms and writing contracts. The latter, of course are more diverse and complex than is commonly realised. These costs include those related to opportunistic behaviour and bargaining ex-post. Williamson studies state that TCE is an 'interdisciplinary alliance of law, economics and organisation'. This discipline initiated by Cyert and March (1963) concurs with Simon (1979) in describing the key attributes of human actors (Williamson 2010), specifically cognition in the study of economic organisation is applied to bounded rationality and self-interest as opportunism. Bounded rationality suggests that decision-making be constrained within the information available. Williamson studies provide justification for the growth of

conglomerates, which essentially provide their own capital market. He states that using appropriate governance structure, rather than using incentives, will help reduce the costs of any misaligned actions. Contracts are unavoidably incomplete because of bounded rationality, and ex-ante contracts are not self-enforcing due to managerial opportunism. The principal-agent theory assumes that complete contracts are expensive to write, (Hart 1995, 680). The governance structure role is emphasised where there are incomplete contracts due to high costs related to writing complete contracts. Williamson (2002) argues that large corporations will be able to overcome the disadvantages due to scale by the choice of governance structure and minimise transaction costs, for example, in vertical integration. In contrast, North (1990) argues that such alignment may fail to occur, emphasising obstacles presented by the political process.

Williamson (1996) concludes that, except for differences in terminology, both agency theory and TCE are similar and describing similar issues. For example, both agency and TCE are concerned with managerial behaviour and presume that managers are opportunistic. Agency theory considers moral hazard, agency costs and managers' perquisites, whereas transaction cost economics suggests that managers arrange their transactions (Solomon 2007:22-23).

The above provides only a skeleton version of the description of TCE literature. To summarise, according to Solomon, TCE explain that the firms have grown in size to such an extent that they act as substitutes for the market in determining the allocation of resources. The growth of these organisations has seen the need for more capital, which has been raised from the capital markets and, or, by increasing the company's shareholder base. Given that all complex contracts written are incomplete, because of bounded rationality, TCE regards the firm as a governance structure and the transactions are the basic unit of analysis.

### **3.5: Stewardship Theory**

An alternative to agency theory is the stewardship theory. Similarly, to the agency theory, the stewardship theory focuses on the shared goals and norms

between the managers (stewards) and the owners (principals) (Davis *et al.* 1997; Tosi *et al.* 2003). In contrast to the agency theory, there is no conflict of interest between the managers and the owners and a successful organisation develops a structure that has effective coordination. Therefore, executives as stewards are motivated to act in the best interests of the shareholders (Donaldson and Davis 1991; cited in Davis *et al.* 1997, 24).

Davis *et al.* (1997, 21); Tosi *et al.* (2003, 2054) suggest that the stewardship theory defines situations where managers act as stewards and their interests aligned with that of objectives of the principals. Unlike the agency theory, the stewardship theory does not assume that a manager exhibits opportunistic behaviour. The managers' interests align with those of the shareholders and the former aim to achieve good corporate performance. Davis *et al.* (1997) suggest that as managers maximise shareholder value, they also serve their own purpose.

The empirical evidence provided by Donaldson and Davis (1991) using the roles of the CEO and chair as combined supports the stewardship theory, but fails to support agency theory. Stewardship theory rejects the agency assumptions and argues that managers perceive that serving shareholders' interests are also in their own interests. Donaldson and Davis (1991) argue, in relation to stewardship theory and agency theory, that the key issue is not whether one is more valid than the other is, for 'each may be valid for some phenomena but not for others' (1991, p. 60).

Stewardship theory focuses on the governance structure as to whether it facilitates effective actions by the managers, where managers as stewards are provided with appropriate empowering governance structures and mechanisms. This suggests that managers should be trusted, given authority and discretion, as control is viewed to be opposing managers' motivational behaviour (Davis, Schoorman and Donaldson, 1997, cited in Clarke 2007b, 121). For example, stewardship theory, as shown by Donaldson and Davis, supports the duality of the roles of the CEO and chair as held by a single individual, yet this feature of the board structure is undesirable under the agency theory. Tosi *et al.* (2003) suggest that, in contrast to

agency theory, which requires monitoring and incentives, these strong control mechanisms will inhibit stewards' motivation and generate problems or difficulties instead of achieving shareholders' interest. Organizations that exhibit a stewardship orientation are able to direct resources, that would have been spent on monitoring and control, toward maximising company performance (Davis *et al.* 2010). Although stewardship theory is not the theoretical framework used in this thesis, research has shown that stewardship theory can help explain higher performance in family run businesses (Eddleston and Kellermanns, 2007 cited in Davis *et al.* 2010, 1094). Indeed, some companies on the Alternative Investment Market may be family-run and hence stewardship theory may be associated with the governance of these companies.

The Madoff ponzi<sup>8</sup> scheme epitomises all, that is, wrong with modern society, such as the pursuit of individual self-interest at the expense of a broader base of stakeholders and short termism in which to create and maintain company value. Hence, stewardship approach to governance is more appropriate to constrain the self-interest of the managers. Stewardship theory reflects a continuing commitment to others based on the objective to maintain the covenantal affiliation and upholds both the principals and the stewards to work towards a common goal, without taking any advantage of each other. Hernandez (2012, 174), therefore, defines stewardship as: *'the extent to which an individual willingly subjugates his or her personal interests to act in protection of others' long-term welfare'*.

As such, stewardship theory rejects self-interested behaviour by the agents, holds that managers inherently seek to do the job well and maximising company profits and returns to the shareholders. For the AIM companies, as some of them may be family owned, stewardship theory might be a useful framework to use for examining a context where the owners and managers interests are aligned to those of

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<sup>8</sup> For more information on Madoff trial see the article by David Teather in the Guardian, 30 June 2009, <http://www.theguardian.com/business/2009/jun/29/bernard-madoff-sentence>, accessed 1 July 2012. The term 'ponzi' comes from Carlo Ponzi, one of the most famous for the architect of a pyramid scheme, and his name is now used to describe illegal financial schemes.

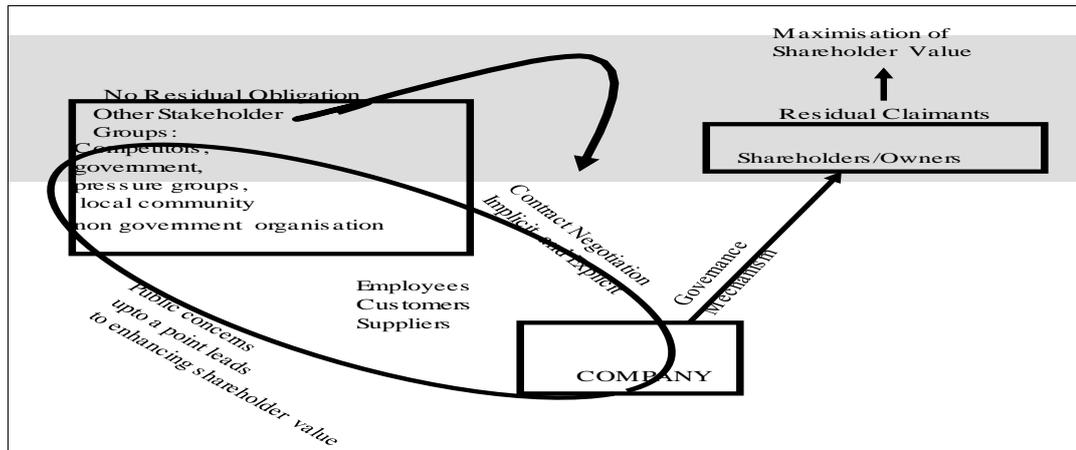
the company. Hence, the interpretation of the empirical results for this thesis should bear this in mind.

Other theories have drawn from social and political theory, in particular, the stakeholder theory, institutional and legitimacy theory. In recent years, these theories have informed the analysis of corporate social responsibilities and voluntary disclosure.

### **3.6: Stakeholder Theory**

Current corporate governance theories centre around two key opposing parties, shareholders and stakeholders. The shareholders' perspective is far more traditional regarding the corporation in question as a manner by which to maximise shareholders their returns (see Figure 3.3). Companies agree the need to develop a multidimensional perspective to incorporate stakeholder needs into a long-term value creation process (Freeman (1984) cited in Bonacchi and Rinaldi 2006, 53). These stakeholders include employees, creditors, suppliers, customers and the local community. They have a legitimate interest in the corporation and as Freeman and Phillips (2002) suggest that an organization's success is symbiotic with the health of its relationships with key stakeholders. The actual terminology '*stakeholder*' first appeared in the Stanford Research Institute (now SRI International, Inc.). The SRI definition of stakeholder is, '*those groups without whose support the organization would cease to exist*' (SRI, 1963; quoted in Freeman, 1984, 31; Clarke, 1998. 186) suggests that corporate managers should encourage beneficial contributions from their stakeholders. The stakeholder terminology challenges the shareholder group as the sole group to which the managers are responsible.

**Figure 3.3: Shareholder and Stakeholder View**



*Source own*

Stakeholder involvement may be influential in preventing the failure of Anglo-American corporate governance system (see, Blair 1995). According to Freeman, the management's role should include the broader view of responsibility towards multiple stakeholders. Rather than being agents of the shareholders, managers should take into account the rights and interests of all legitimate stakeholder. Whilst managers have a fiduciary duty towards the shareholders' interests, managers' often-myopic views of pursuing personal interests or increasing shareholder return necessitate that stakeholders groups are adequately protected by use of institutions, organisational norm or law (Parkinson 2003, 495). Parkinson (2003) suggests that it be difficult to identify conceptual justifications on which each stakeholder group can make a legitimate claim to the firm. Furthermore, it will induce practical difficulties in facilitating arrangements such as employee representation on the board in the UK. Therefore, participation of relevant stakeholder groups would require redesign of governance structure at an institutional level.

The stakeholder concept is theoretically simple; however, the complexity of this subject arises due to various literature definitions of stakeholder. Table 3.2 shows some of these definitions. This range of definitions suggests that different authors have varying view of what a stakeholder represents and that no consensus as to what/who a stakeholder is exists. However, the most widely used definition is that by Freeman (2010, prior version 1984) shown below:

*'A stakeholder in an organisation is [by definition] any group or individual who can affect, or is affected by, the achievement of the organisation's objectives'*

**Table 3.2: Definitions of Stakeholder**

<b>Author</b>	<b>Definition of Stakeholder</b>	<b>Comment</b>
The Stanford Research Institute (1963. cited in Clarke 1998; Mitchell <i>et al.</i> (1997)	'Those groups without whose support the organisation would cease to exist'	The term stakeholder theory was first used
Jones (1980, 59)	The notion that corporations have an obligation to constituent groups in society other than stockholders and beyond that prescribed by law or union contract, indicating that a stake may go beyond mere ownership	Used to define corporate social responsibility
Freeman and Reed (1983, 91)	'Those groups on which the organisation is dependent for its continued survival'	Narrow definition and shows similarities with SRI (1983, cited in Freeman 1984)
Freeman (1984, 46)	Stakeholder-'any group or individual who can affect or is affected by the achievement of the organization's objectives'	Widely used, broad; stakeholder group can virtually include anybody
Carroll (1989, 60),	'Asserts to have one or more of the kinds of stakes in business'-may be affected or affect	
Alkhafaji (1989) cited in Mitchell <i>et al.</i> (1997)	'Groups to whom the corporation is responsible'	Who receives the resources of the firm? Suggesting an inherent conflict between the shareholders and the other stakeholders
Thompson <i>et al.</i> (1991, 209)	Groups 'in relationship with an organisation'	
Clarkson (1995, 106),	Have, or claim, ownership, rights, or interests in a corporation and its activities'	
Donaldson and Preston (1995, 85)	Persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity'	Interests of stakeholders have intrinsic worth irrespective of the interests of shareholders. Therefore, the success of a corporation is seen as a driver for advancing the interest of stakeholders and not merely shareholders

In several countries the maximisation of shareholder value may not be the main purpose of the corporation, for example, Japanese companies have focused on long-term growth and lower dividend payouts. Germany's institutional environment strongly embedded within a mandatory legal system permits the two-tier board

system. In addition, Germany is a good example of the stakeholder theory due to the 'Co-determination Act' ensuring employee representation on the supervisory board of the listed companies (Jackson and Moerke 2005, 352).

Clarke (1998, 187) emphasises that stakeholder role should not be seen solely as containing management behaviour via 'legal and social constraints', but also enabling (Wieland 2005, 77) managerial behaviour. Several codes, principles and guidelines are now available for assisting companies by recommending potential corporate governance structures that can accommodate stakeholders' interests. For example, Porter (1992) recommends that the US policy makers and institutional investors should increase the employee involvement by encouraging long-term employee ownership, and make board representation of key stakeholders in their governance structure if they want companies to remain competitive with those of Germany and Japan. Turnbull (1997) describes employees, customers, suppliers and local community as 'strategic stakeholders', and managers need to consider the stakeholders' interests.

The OECD (1999; 2004) include in its principles, the role of stakeholders in corporate governance. The principle states that

*'Corporate governance framework should recognise the rights of stakeholders established by law or through mutual agreements and encourage active cooperation between corporations and stakeholders in creating wealth and the sustainability of financially sound enterprises'.*

The Hampel Report (1998, 11.17) emphasises that ideal corporate governance includes a company meeting its' responsibilities to stakeholders, but nevertheless, is accountable to shareholders. However, the Hampel Report recognises that companies need to develop and sustain stakeholder relationships (s1.18) in order to achieve long-term shareholder value. Hence, the Hampel committee emphasise directors' responsibilities to be accountable to the shareholders. Interestingly, despite the financial crisis and its effect on a wide range

of individuals and companies the Walker Report (2009), similarly does not focus on stakeholders' interest.

To summarise, Gray *et al.* (1995, 53), suggests that managements' goals are ultimately concerned with the long-term survival of their corporation. From their analysis, stakeholders' support is crucial for the longevity of the corporation.

### **3.7: Legitimacy Theory**

Legitimacy theory is systems orientated theory where organisations are viewed as components of a larger social environment within which they exist (Carnegie and Napier 2010, 361). This theory uses a '*social contract*' to represent both implicit and explicit expectations to exist between the organisation and the wider community, and not just the organisation and the shareholders. Lindblom (1994 cited in Gray *et al.* 1995, 54) argues that legitimacy is:

*'a condition or status, which exists when an entity's value system is congruent with the value system of the larger social system of which the entity is a part. When a disparity, actual or potential, exists between the two value systems, there is a threat to the entity's legitimacy'*

Legitimacy theory assumes that corporations are bound by a social contract in which it agrees to perform various socially desired actions in return for approval of its objectives, other rewards, and this ultimately guarantees its continued existence (Guthrie and Parker 1989, 344). Deegan (2000) suggests that organisations aim to operate within the bounds and norms of their respective societies; that is, they attempt to ensure that their activities are perceived by external groups as legitimate. Legitimacy theory provides a theoretical basis for understanding the use of externally focussed reports by the management to raise the company's reputational awareness. This fits in well with corporate governance practices, as the companies need to disclose to attain legitimacy. An organisation is deemed legitimate when the social values of the company, both explicit and implicit are fitting with the norms of

acceptable behaviour within the social system. Legitimacy as defined by Suchman, (1995, 574) is

*“a generalised perception or assumption that the actions of any entity are desirable, proper, or appropriate within a socially constructed system of norms, values, beliefs and definitions”*.

Mitchell et al. (1997, 866) suggests that the definition of legitimacy by Suchman (1995) is imprecise and difficult to operationalise, yet it is representative of sociological definitions of legitimacy.

Deegan and Rankin (1996) criticise legitimacy theory, and state that companies will only voluntarily disclose positive information. They state that any deviations of compliance with societal expectations require the deterrence of legal sanctions, restrictions on external finance and labour resources and decline in the demand for the company's product or service. Over time, the behaviour of the companies has changed with substantial growth in the disclosure of corporate governance reporting and corporate social reporting. As a result, management may use disclosure reports enhancing the company's reputation and minimising the risk of having its share price lowered. Although legitimacy theory is not the main theoretical framework used in this thesis; nevertheless, it is difficult to ignore the notion of legitimacy from corporate governance issues. To avoid severely breaching social contracts, the majority of the AIM companies show evidence of audit and remuneration committees made up of independent non-executive directors. This legitimately supports management actions and their values on the use of better corporate governance practices and their actions are congruent with the norms of acceptable behaviour within the social system. This in turn reduces adverse effects upon the company and others on the LSE AIM. Under the legitimacy theory, as stated by Deegan (2000, 293) perceive that the survival of an organisation is threatened if society sees that the organisation has violated its social contract. This is important in the context of the AIM companies. Hence, AIM companies need to operate within the bounds and norms of the guidance provided by the AIM Rules, the Quoted Companies Alliance Guidelines and to have a nominated adviser

(Nomad) at all times to ensure that their activities are perceived by society as legitimate. Violation of any of the rules may result in public censure of the company and the Nomad by the London Stock Exchange, thus damaging the reputation and image of both the company and the Nomad. For example, Minmet – an AIM quoted company provides evidence on the breaching of the AIM Rules, the company's trading was suspended and subsequent restoration of the company's shares to trading in 2008 show a drop of 63% in the share price from the pre-suspension share price.<sup>9</sup>

In essence, an important observation from the above section is that legitimacy and institutionalisation are nearly identical. Legitimacy theory deals with organisational structures and as such within this concept, both the legitimacy and institutional theories are considered to be similar.

*'From an institutional perspective, legitimacy is not a commodity to be possessed or exchanged, but a condition reflecting cultural alignment, normative support, or consonance with relevant rules or laws' (Scott, 2001: 45).*

Hence, companies try to manage their legitimacy because as Deegan and Rankin (1996) emphasise that failure to conform with societal expectations may adversely affect the company such that they risk sanctions being imposed. As UK's corporate governance system is legitimately seen as embedded within the principle-based concept, the competence instilled in the investors has seen an increase in the number of new companies listing on the AIM as well as on the main market. If legitimacy is of concern, when governance practices are viewed as illegitimate or institutional measures are not in place then we are likely to observe a decline in the growth of the company's share price, companies reluctant to list on to the country's stock market and in the worst scenario demise of the company. As an extreme case, as Carnegie and Napier (2010, 382) suggest that Arthur Andersen, the accounting

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<sup>9</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notice/min-met-public-censure.pdf>, accessed 1 October 2014.

firm, failure to meet societal expectations as external auditors of Enron in the US resulted in the collapse of both Arthur Andersen and Enron. Thus, the death of Arthur Andersen de-legitimises the whole of the accounting profession. The following definition linking corporate governance and legitimacy is provided by Judge *et al.* (2008, 768) who state that

*'corporate governance legitimacy is defined as the practices and structures within a nation that are perceived to result in corporate behaviour that is appropriate to meet the needs of society'.*

Indeed, corporate governance legitimacy is challenged within the AIM companies. For example, the legitimacy of the independence of the members of the board committees as an internal governance mechanism orientated to protect shareholders' interests is questionable. Nevertheless, UK has built a strong reputation and legitimacy of its corporate governance practices evidenced by the standards and the continuous review of the UK Corporate Governance Code. The discussion in this section provides some insights into corporate governance legitimacy and how it is influenced by the institutional context.

### **3.8: Institutional Theory**

Institutional theory emerging from an open systems theory emphasises that organizations are also social and cultural systems. As such, institutional theory views organizations and organizational actors, not only for competition of resources, but ultimately to seek legitimacy (Suchman 1995). Drawing from the works of Meyer and Rowan (1977) and DiMaggio and Powell (1983) institutional theory can be described as organisational structures and processes that conform towards isomorphism with the accepted norms for particular organisations. For example, the remuneration committee will structure the pay optimally to align the interests of the agents and the principals in an agency theory. However, in an institutional theory organisations will copy the organisational structures of others more successful and adhere to perceived regulatory processes that are taken-for-granted.

Zucker (1987, 444) argues that the institutionalisation phenomenon is a process by which social relationships and actions come to be taken-for-granted. Despite institutionalisation's origin from social phenomena, highly institutionalised structures are observed as part of the inter-subjective world consisting of objective structures independent of any specific actors or situations (Zucker 1977, 729). Second, institutionalisation causes variation in organisational forms, such as roles.

An alternative explanation for the institutional theory is provided by Scott (2001) who suggests a multi layered diffusion concept, differentiated into three hierarchical levels: societal, institutional governance structures and actors (Scott 1995, 147). The highest level occupied by societal (and global) institutions, where models and menus are both formally proposed and informally ratified. These provide the institutional context: what is deemed possible, acceptable and legitimate. At the next level within Scott's model, there are the governance structures, consisting first of organisational fields, and organizations themselves. Their organisational fields and institutional environments influence the different organisations. Judge *et al.* (2008, 768) explains that an organisational field is where organisations that operate in the same area with similar customers served and other organisations that in turn influence their survival such as financiers. The final level consists of actors in the institutional settings, who may be individuals or groups.

Each of these levels influences and is influenced by the forces of diffusion and obligation of institutional norms while adopting change within the institutional norms. One of the criticisms of the above model is that organisations conform to social expectations and norms even when it is inefficient. Therefore, the assumption of institutional theory is that it views organisations as operating within a social framework of rules, norms, values and taken-for-granted or routine assumptions (Oliver 1997, 699). However, according to Scott (1987, 498), organisations do not impulsively conform to institutional pressures because they provide a reality or taken-for-granted beliefs, but adapt flexibly to improve their legitimacy.

Nevertheless, the above constraints and forces cause isomorphism. ‘Organisational isomorphism’, is used to describe the homogenisation of organisations, where isomorphism forces one unit within a population to be similar to other structures that meet the same set of environmental conditions (DiMaggio and Powell 1983, 149).

Davis (2005) argues that the corporate governance research should be explained within the ` institutional context, rather than the use of traditional agency or transaction cost perspective. In addition, to explain corporate governance practices institutional context is favoured over the company or individual level. For example, the convergence of corporate governance practices within the European Union can be explained mainly due to the institutional convergence (Deeg and Perez 2000).

Institutional theory suggests that firm managers look to industry norms, company customs, and management enthusiasm and others to formulate their policies, for example, compensation package (Eisenhardt 1988, 489). An alternative explanation of institutional theory is provided by Eisenhardt (1988) who suggests three mechanisms for institutional isomorphic change to occur: coercive, mimetic and normative. Coercive isomorphism originates from political pressures and organisations seeking legitimacy as from government mandates. Mimetic isomorphism is in response to uncertainty and seeking legitimacy, for example, from ‘comply or explain’ concept managers may be inclined to use similar explanations used by other companies, rather than provide more specific and relevant to their company for non-compliance with the governance code. This is to avoid rejection of their explanation by the investors and having a negative effect on the company’s share price. Normative isomorphism ensures organisations conform in order to be perceived as partaking legitimate actions. Normative isomorphism incurs because of social obligation to comply, embedded in social necessity or what an organisation or individual should be doing. For example, the nominated advisers’ profession will cause the executives in the AIM companies to conform in ways that are consistent with normative isomorphism.

Isomorphism can explain the similarities in organisational structures; coercive can explain that law drives the adoption of particular structures for organisations, for example, the presence of a dual board structure and employee representation on the supervisory board in the listed companies in Germany. Managers build organisational structures as copies of existing efficient structures, thus minimising costs for the organisation instead of spending on research to experiment for an appropriate structure. Hence, institutional theory within an Anglo-Saxon context may include more voluntary policies, whereas in other context may be shaped by law, customs, and religion. Institutional structures may not be efficiently working because of management power and the management will adopt structures, which are acceptable within the law, market and industry norm. For example, the use of three independent, non-executive directors is norm for the listed companies in the UK, but it is possible that the management will recruit individuals who do not have appropriate skills for monitoring and challenging the executive directors. Consistent with the institutional theory, Aguilera and Cuervo-Cazurra (2004) suggest that the adoption of governance codes enhances legitimacy and effectiveness of corporate governance systems. Legitimacy of the governance systems is consistent with the conformity to governance practices, whereas the effectiveness concerns the protection of the minority shareholders. Enrione *et al.* (2006) study 150 different codes of governance in 78 countries for the period 1978 to 2004 and use the institutional theory to help understand the institutionalisation process of codes of governance. They generalise that lawmakers and governance enactors (defined as majority and controlling shareholders and executive directors, p.965) initiate the issuing of the codes of governance.

### **3.9: Managerial Hegemony Theory**

Managerial hegemony relates to the concept that although shareholders may legally own firms, they no longer effectively control them, since the control is assigned to the professional managers. The theoretical perspective suggests that senior management selects, from their associates, members of the board who will not inhibit managements' actions; members are willing to be subservient participants in the governance process and dependent on the management for information about the company. Although, hegemony approach suggests compliance with the regulatory

requirements; however, it has negative consequences for the shareholders, for example, minimal independent monitoring, diminishing stewardship function and contributory factor to management entrenchment (Core *et al.* 1999; Cohen *et al.* 2008, 186). This is in contrast to agency theory where the emphasis is on the board function of independent supervisory role. Consequently, from a hegemony perspective the board's functions are limited to ratifying management's actions, satisfying regulatory requirements and enhancing executive compensation (Core *et al.* 1999). Simply put, managerial hegemony suggests that the boards are weak and low competence in monitoring management and representing the shareholders' interests.

With respect to the functional role of the board of directors, the implication of managerial hegemony is that members of the different board committees may be under the influence of the management. This theory also suggests that the board will side with the management even when there are obvious conflicts of interests with the management and the shareholders.

### **3.10: Class Hegemony Theory**

The class hegemony theory suggests that executives within a company and executives from other companies share a commonality of interests. Therefore, the class hegemony extends beyond the boundary of the firm. Here, executives from different organisation form bonds due to mutual interests. These bonds form relationships, resulting in class hegemony, which in turn form a class across the organisations. As a result of the power among these executives will tend to protect management's interests, for example, setting high executive pay. This theory arguably suggests that due to the principal-agent relationship, the agents have discretion in setting their own pay (Jensen *et al.* 2004).

### **3.11: Conclusion**

This chapter provides an understanding of the theoretical approaches to corporate governance and to assess to what extent agency theory can be extended to smaller companies listed on the AIM. The theories help to explain managers'

behaviour. Indeed, some of these theories assent that managers may not act in the best interests of the organisation. Employing a single theoretic approach in corporate governance research, where agency theory is the main theory, offers an incomplete understanding of governance, in particular, to the smaller companies. This study advances the agency theory to quoted companies on the AIM and issues of conflict between the managers and the shareholders. Increasing the ownership shareholding of the executives should reduce agency costs because it naturally aligns the interests of the managers and that of the shareholders. However, for the AIM companies, the issues of conflict may be exacerbated between the large shareholders and the minority shareholders. Chapter 9 empirically considers the ownership in the AIM companies. Each of the different theories helps to understand different aspects of corporate governance and a single theory is unable to provide a holistic understanding of the issues of corporate governance. The inherent complexity involved in corporate governance issues is unlikely to enable the use of a single theory alone because of the economic, political, culture, legal and social roles. Agency is the predominant theory in this thesis to explain corporate governance within the AIM companies, both theoretically and empirically, nevertheless, it is important to recognise that other theories need to be included, rather than to treat each of them as separately. This is well recognised by researchers, for example, Eisenhardt (1989) and Cohen et al. (2008, 183). Later, the empirical section (see Chapter 9) will extend to the managerial ownership and company performance relationship (Demsetz and Lehn 1985; Morck *et al.* 1988; McConnell and Servaes 1990; Short and Keasey 1999). Chapter 10 considers the managerial remuneration using the two theories commonly associated with remuneration, agency theory and the managerial power (Bebchuk and Fried 2003; Bebchuk and Fried 2004). The issues of corporate governance using agency theory in large listed have been empirically discussed. However, relatively little academic attention has been paid to the smaller quoted companies, in particular in the second tier exchanges such as the AIM.

## CHAPTER 4 CORPORATE GOVERNANCE IN THE UNITED KINGDOM

### 4.1: Introduction

The objective of this chapter is to review the authoritative contributions on corporate governance that appeared since the Cadbury Report (1992) in the United Kingdom. In Chapter 2, the most quoted definition is that of Cadbury (1992), *'the system by which companies are directed and controlled'*. Chapter 3 considered some of the important theories that help explain corporate governance. This chapter builds up a picture of the corporate governance system in the United Kingdom, following the publication of the Cadbury Report in 1992 to the current UK Corporate Governance (2012). Hereinafter, the UK Corporate Governance Code (2012) will be the 'Code 2012'. The corporate governance problems are not new, for example, the problems of stewardship when a principal entrusts an agent to manage the principal's property, during his/her absence and the ex-post evaluation of stewardship. Therefore, agency theory can strongly embed the theoretical framework for the governance problems. As Nordberg and McNulty (2013, 356) explain that the UK governance codes are based on the agency theory, but its logic arises and evolves through a broader concept of accountability. This chapter is useful for this thesis as the Codes provide the texts of corporate governance and frames an awareness of the roles of the board. The Code's objective is to help raise the standards of corporate governance and the level of confidence within companies. The Quoted Companies Alliance guidelines on Corporate Governance for the smaller quoted company sector are the minimum governance recommendation that the Alternative Investment Market (AIM) companies need to adopt. The QCA take their guidance from the UK Corporate Governance Code.

Aguilera and Cuervo-Cazurra (2004, 417) define codes of governance as a set of *'best-practice'* recommendations as regards the behaviour and structure of the board of directors of a company, executive remuneration, role of shareholders and the role and position of the auditor. In the UK, the Cadbury Report was the first comprehensive code of corporate governance, setting the benchmarks, and its introduction has been a major step in the development of corporate governance in the

UK and worldwide diffusion. The development of the corporate governance code in the UK has become an important institutionalisation process. However, Solomon (2007, 50) suggests that to control and govern company's management there are alternatives to the development of national corporate governance codes and reports. These include shareholder activism, fiduciary responsibility of the directors imposed by company law, the legal requirement for an independent audited annual financial report, the overseeing by a regulatory body, the Stock Exchange Model Code on directors' share dealing and the City Code on takeovers and mergers.

It is interesting to note that the development of the various corporate governance reviews have been initiated by external participants in the UK, rather than government initiatives, except for the Higg's Report (see Chapter 4, s.4.9). The UK's Cadbury Code (1992) began as principles-based rather than prescriptive rules, as in the United States, and the subsequent 'Code 2012', follow the same concept. The enforcement of the recommendations within the Code does not rely on the legal system, but a mix of regulatory authority, that is, London Stock Exchange, listing authorities and on investor attitude. The adoption of the Code's recommendations is the hub of the 'comply or explain' approach. The 'comply or explain' approach means that the companies have a choice of whether to follow the guidance set out in the Code, or to explain why they have chosen not to, leaving the final judgement to the stock market. In theory, the 'comply or explain' approach allows a company to opt out, in effect, from any one or more provisions of the Code. However, and as a condition of listing on the LSE, companies have to explain any deviations from the governance practices to the investors in the company's annual reports. This mandatory disclosure obligation underpins the Code and effectively setting the compliance with the Code as the default for listed companies (Moore 2009, 86).

The 'comply or explain' approach is not without its criticisms. The RiskMetrics (2009) study commissioned by the European Union concludes that on analysis of the informative value of statements of non-compliance, the 'comply or explain' approach does not appear to have worked effectively. The study finds that less than half of explanations given can be qualified as sufficiently informative (cited

in FRC, 2011, 5). The problem of low quality governance reports is connected to the problem of low shareholder engagement.

In the UK, monitoring of the compliance with the Code takes place in a number of ways. Financial Reporting Council (FRC) (2011) state companies' monitoring of the adoption of the code by institutions such as the Association of British Insurers, and others such as Manifest and Pensions Investment Research Consultants, analyse resolutions at general meetings companies listed on the main market for compliance with the Code. The number of academic research on the analysis of the 'comply or explain' is low. Seidl *et al.* (2013) uses 257 UK and Germany listed companies to develop a taxonomy to identify the extent of using the 'explain' criteria, and how companies can legitimise their explanations in respect of the deviations from compliance. According to Seidl *et al.* (2013, 808) companies maintain their legitimacy by use of compliance statements and the explanations provided to be considered as legitimacy devices. A basic form of explanation includes a declaration of compliance with a particular code provision. In this manner, the company has employed legitimacy tactic by seeking approval by conforming to an institution (Suchman 1995; Seidl *et al.* 2013). The AIM companies apply the 'comply or explain' concept, but some companies provide an explanation for non-adoption of the Combined Code or its provision by reference to 'size'. However, 'size' is referred to within the codes. The company's disclosure in respect of their compliance to the Code suggests that the companies show legitimate conformance to the 'comply or explain' approach, but also deviate where a code provision is inappropriate within their context. Despite the considerable claims in the code and that adoption of the code improves performance, Gompers *et al.* (2003) argue that it has been difficult to substantiate this. Nevertheless, there is evidence to suggest that, in the context of systems, which have liquid capital markets such as the UK and US, compliance with codes help to cut the cost of raising external capital for companies, and enhances investor confidence.

The impact of the failure of companies raises questions in relation to the social legitimacy of corporations. Table 4.1 shows a list of fraud examples in the UK

during the late 1980s and the early 1990s. These failures were the catalyst for the formation of the Committee on the Financial Aspects of Corporate Governance in May 1991, a quasi private sector and public policy (Nordberg and McNulty 2013, 350). The Cadbury Report (1992) addresses the specific scandals that were dominant in causing public distress:

*'It is, however, the continuing concern about standards of financial reporting and accountability, heightened by BCCI, Maxwell and the controversy over directors' pay, which has kept corporate governance in the public eye' (Cadbury Report, 1992, 9).*

**Table 4.1: Examples of Fraud Cases in the UK During the Period 1980-1990**

<i>Name</i>	<i>Examples of Fraud</i>
Barlow Clowes, Lever (1992)	Founding CEO stole money from savers
Brent Walker plc	Founding CEO stole money from savers
Bank of Credit and Commerce International (1990)	Auditors did not reveal the going concern nature of the bank and collapsed shortly after release of audited accounts- Financial statements were signed off by the auditors with no qualifications. In addition, business structures played one regulator off against others
County NatWest	Senior executives accused of inflating the success of rights issue of Blue Arrow shares by selling shares in a non arm's length transactions
Guinness	Share prices were inflated during a takeover battle for Distillers
Polly Peck International (1990)	Founder CEO siphoned corporate funds to offshore companies-
Robert Maxwell (1991)	Used employee pension funds to support his ailing business- fraud conducted by people who were both shareholders and managers.

*Source: Boyd (1996, 168)*

Following from the Cadbury 1992 review, the UK has committed to adopting a rigorous approach to deal with issues in corporate governance as problems/crisis emerge. The approach begins by initially setting up a committee to deal with issues of corporate governance of that time. Jones and Pollitt (2004, 163) refer to four major stakeholder groups as *'influencers'* who may form part of the committee.

These include business (for example, corporations, trade unions, profession bodies, and institutional investors), authorities (for example, the Bank of England and the government), public opinion (for example, media), and exogenous factor (for example, financial scandals). All of the reviews focus is on preserving shareholder value principle.

#### **4.2: Cadbury Report (1992)**

The Cadbury committee set up by the Financial Reporting Council, London Stock Exchange and the accountancy profession in May 1991 in order to assess the financial aspects of corporate governance and act to reduce UK's poor image in the financial markets. This was a result of a series of corporate scandals and the collapse of several companies, which had previously received clean audit reports. The Cadbury committee was set up, therefore, to address the main concerns of low levels of confidence in financial reporting and in the auditors to provide the safeguards expected by the users of company's reports (Charkham 1994, 249). Therefore, the recommendations focus towards the issues in corporate governance of control and accountability. The Cadbury Code's open definition of corporate governance concern is with the whole area of corporate governance (see Chapter 2). This puts an emphasis on systems, processes and controls over accountability and decision-making (Shaw 1997, 23). The Cadbury Report's objective is to enhance openness, integrity and accountability in the British corporate governance system and is based upon two main ideas (Finch 1992). First, that self-regulation is better than statutory enforcement for improving the way companies are run. Second, compared to regulators, the financial markets are a more efficient system of providing external controls over those companies that fail to adopt satisfactory standards of corporate governance. Keasey and Wright (1993) suggest that the strong reliance of corporate governance framework in the UK on self-regulation and market-based sanctions shows weaknesses hence rendering accountability to be problematic.

Cadbury recommended that quoted companies should adopt a governance structure that complies with the Code of Best Practice. The Cadbury Report (1992, 58-89) recommendations include the separation of the roles of the CEO/Chair

(duality role), so no one person had unfettered power, independence of non-executive directors, board sub-committees, a compliance statement, 'comply or explain' basis. Thus, embracing appropriate governance structure will provide effective monitoring of the board and companies will adopt the shareholder value orientated governance practices. Some of these are further explored in Chapter 8. Gamble and Kelly (2001, 114) criticise the development of the codes as they offer an enlightened shareholder value perspective and obscures the persistence of unchecked managerial power. However, Conyon and Mallin (1997) show that, despite the voluntary adoption of the Cadbury Report, the UK listed companies have widely accepted the recommendations such as CEO/Chairman as separate individuals, establishment of the board committees and the number of non-executive directors. Weir and Laing (2000) using 200 UK companies in 1992 and 1995 show that the returns are higher for companies adopting the Cadbury Report and have established a compensation committee. They also show that, since the Cadbury Report, UK companies have increased non-executive director representation, reduced CEO duality, and increased the presence of board committees Weir *et al.* (2002, 580). Dahya *et al.* (2002) explored how the adoption of the Cadbury report affected CEO turnover. The findings show that CEO turnover increased due to the need for separation of the roles of the chairman and the CEO. Literature on country surveys shows that even with the voluntary compliance of the corporate governance code provisions; listed companies show a positive response to code recommendations as a direct response for company transparency and accountability.

Kay and Silberston (1995) state that the corporate governance recommendations should recognise a trusteeship model and ensure that managers are able to pursue multiple objectives, but should be accountable for their performance. The organisational structure and system is flexible to encourage unity within the management team, but open to exogenous factors to prevent opportunistic behaviour. This basic objective of 'managerial freedom with accountability' is well set out in the Cadbury Report section 1.1 p 10. The Cadbury Code as a model of regulation for listed companies is imitated by many countries (Aguilera and Cuervo-Cazurra (2004) and Iskander and Chamlou (2000)). Authors, however, question its value, for example, Finch (1992), Du Plessis *et al.* (2010) states that the Cadbury Report had a

rather narrow view focusing on the financial aspects of the corporate governance and that the Cadbury Report assumed that accountability to shareholders as the primary objective of corporate governance. However, it is overly optimistic on its reliance on self-regulation. Nevertheless, the Code of Best Practice recommended by the Cadbury committee have become authoritative since the companies must disclose whether they ‘comply or explain’ with the Code recommendations in order to be listed onto the London Stock Exchange. As of July 1993, the Stock Exchange rules require companies to adopt the ‘comply or explain’ approach of the Code and provide the reason for any deviations for non-compliance, in their annual reports. Sir Adrian Cadbury’s concerns regarding the adoption of the Code were twofold: first that it was up to the shareholders to ensure that the company complied with the Code. Second as Cadbury (1992, p12) puts it:

*‘We recognise, however that if companies do not back our recommendations it is probable that legislation and external regulation will be sought to deal with some of the underlying problems, which the report identifies. Statutory measures would impose minimum standard and there would be a greater risk of boards complying with the letter, rather than with the spirit, of their requirements’.*

Here, Cadbury emphasises the principle-based regulation and challenges that the corporations would have to meet the recommendations to make the concept work. The implication is that the organisation’s survival is under threat if society perceives any breach of legitimacy with the social contract (see Chapter 3, s.3.7 for the discussion on legitimacy theory). The Hampel Report (1998, s1.5, p8) stated in respect of the Cadbury Report (1992) the following:

*‘struck a chord in many overseas countries, it has provided a yardstick against which standards of corporate governance in other markets are being measured.’*

Cadbury echoes the agency problem in the following statutory requirements:

‘Given the separation of ownership from management, the directors are required to report on their stewardship by means of the annual report and financial statements sent to the shareholders’ (Cadbury Report 1992, s. 5.1).

Table 4.2 shows the development of the corporate governance codes over the last two decades since the launch of the Cadbury Report (1992).

**Table 4.2: Development of Corporate Governance Codes in the UK**

<b>Year</b>	<b>Name of the Report</b>	<b>Issuer</b>	<b>Comment</b>
1992	Cadbury Report	LSE, FRC, accountancy profession	First version of the UK Corporate Governance Code looked at Financial Aspects of Corporate Governance; for all listed companies, but recommended for small companies to adopt, hence includes AIM.
<b>Post Cadbury and its successors</b>			
1995	Greenbury Report	CBI	In response to concerns over the compensation packages awarded to some directors.
1998	Hampel Report	LSE, CBI, IOD, NAPF, CCAB, ABI	Review and revise the findings of the Cadbury and Greenbury report..
1998	Combined Code	LSE, FRC, CBI	Drawing on the work of the Cadbury, Greenbury and Hampel committees, the original Combined Code.
1999	Turnbull Report	ICAEW	Best practice and principles-based approach to the implementation of a sound system of internal control and reporting to shareholders on internal control.
2001	Myners Report	UK Treasury	Institutional Shareholders in UK; focus on UK pensions industry.
<b>Enron and the financial crisis</b>			
2003	Higgs Report	DTI	Role and Effectiveness of NEDs; many recommendations of the Higgs report were included in the Combined Code.
2003	Smith Report	FRC	Recommendations in relation to the audit committee and the role of directors serving on the audit committee.
2003	Tyson Report	DTI, LBS	Review of the recruitment and development of non-executive directors.
2003	Combined Code	FRC	Revisions to the Code.
2004/ 2005	Review of the Impediments to Voting UK Shares		Report by Paul Myners allows an audit trail of vote instructions and transparency between issue and beneficial owner.

<b>Year</b>	<b>Name of the Report</b>	<b>Issuer</b>	<b>Comment</b>
2006	Combined Code Revised	FRC	.
2008	Higgs Report Revised	DTI	
2008	Combined Code Revised	FRC	
<b>Banking and the financial crisis</b>			
2009	The Walker Review <sup>10</sup>	HM Treasury	Review of corporate governance in UK banks and other financial industry entities
2010	Stewardship Code	FRC	To improve the quality of engagement between asset managers and companies to help improve long-term risk adjusted returns to shareholders
2010	UK Corporate Governance Code	FRC	Standards of good practice in relation to board leadership and effectiveness, compensation, accountability and relations with shareholders.
2011	Davies Report		The review identified barriers preventing women reaching the boardroom and made recommendations to increase the proportion of women on corporate boards.
2012	UK Corporate Governance Code	FRC	The changes to the Governance Code are designed to give investors greater insight into what company boards and audit committees are doing to promote their interests, and to provide them with a better basis for engagement <sup>11</sup> .
2012	Stewardship Code revised	FRC	Changes to 2010 Code relate to the definition of stewardship, clarification of the role of asset owner.

### 4.3: Greenbury Report (1995)

The Cadbury Report was followed in 1995 by the report of the Greenbury Committee, in part, a direct response to the growing disagreement over chief executive officer pay levels initiated when executives of the privatised electric

<sup>10</sup> <http://www.frc.org.uk/Our-Work/Codes-Standards/Corporate-governance/UK-Corporate-Governance-Code.aspx>

<sup>11</sup> <http://www.frc.org.uk/News-and-Events/FRC-Press/Press/2012/September/FRC-publishes-updates-to-UK-Corporate-Governance-C.aspx>, comment by FRC Chairman Baroness Hogg, accessed 28 August 2013

utilities exercised share options worth millions of pounds. In January 1995, the group was set up on the initiation of the Confederation of the British Industry. The Greenbury Report set out recommendations regarding directors' pay and share options. The Greenbury Report recommended extensive disclosure in annual reports on compensation and recommended the formation of a compensation committee consisting of non-executive directors. The Greenbury Report reinforced the Cadbury approach by extending the role of the compensation committee. Monks and Sykes (2002, 29) say that the effect of this report on limiting the growth of executive compensation was negligible.

Additionally, the Greenbury committee wanted to show the full costs of corporate pension fund contributions to directors' compensation, but hitherto hidden, and often very high. Some stakeholder groups, particularly from the business sector, fearing a *'fat cat'* repercussion, opposed compensation disclosure, although a compromise was reached allowing companies to select full or partial disclosure on compensation details. This suggests that there is tension between promoting accountability and legitimacy. The credibility of the Greenbury report is underpinned by the Stock Exchange's action on enforcement via the listing rules. However, Conyon and Murphy (2000) state that despite the Greenbury report the pay levels in 1997 rose by 18%. Although, the CEO pay in the UK has seen substantial growth, it has trailed behind the pay levels of the CEOs in the US. Specifically, the year 1997 is important since it is the first year covered by the UK disclosure requirements for compensation data in the company's annual report, thus providing a rich source of data for empirical research.

In contrast to (Stiles and Taylor 1993) survey of 220 UK companies show that the presence of a remuneration committee results in higher pay for the CEO recent studies show that empirical research fails to find any evidence that an increase in independent non-executive directors in the pay setting process reduces CEO pay. Gregory-Smith (2012) find no correlation between CEO pay and the independence of the board. The latter is measured as percentage of insiders on the board and percentage of insiders on the remuneration committee. His work is in agreement to

that of Conyon *et al.* (2011b) who find no evidence that stronger governance provisions result in lower CEO pay outcomes for European CEOs.

#### **4.4: Hampel Report (1998)**

The Hampel Committee was established to review the extent to which the Cadbury Report and the Greenbury Report had been implemented and whether the objectives had been met. The Hampel Report (1998) followed external pressures by the European Commission to harmonize corporate governance rules in member states, for example, two-tier boards making companies responsible to a wider range of stakeholders. However, the Hampel committee did not support this proposition (Haxhi *et al.* 2013, 538). In August 1997, the Hampel Committee produced a draft setting out principles and code, which embraced the Cadbury Report and the Greenbury Report. It concluded, '*public companies are the most accountable to organisations in society*' (Hampel Report, 1998, para 1.1). One of the key recommendations was that companies should have regard to the public acceptability of their conduct.

The report also emphasises the role of institutional investors, in particular, the pension fund trustees, who are the largest group of institutional investors in UK. They are encouraged to adopt a more long-term approach. Despite the recommendations of the good best practice principles by the above three reports, nevertheless, there are concerns as Monks and Sykes (2002, 29) point out the problems of effective implementation.

Despite changes in the institutional environment for the directors to discharge their duties following the publication of Combined Code (1998), the executive pay in UK is still not without problems. According to Perkins and Hendry (2005, 1444) there is continuous influence of use of 'market forces', but the agency theory assumes that agents (management) are opportunistic and potentially exploit asymmetric information in their contractual relationships. According to the Hampel Report (1998), the market will determine the companies' executive remuneration. But the Greenbury Report (1995, s6.2, s6.3 s6.4) argues that although a market in

executive talent exists, however the market remains imperfect for the following reasons: management working in the same companies for long period, remuneration is determined by the board and the remuneration committee, and influenced by consultant surveys and other companies. A potential conflict of interest is pervasive in the AIM companies when directors determine their own remuneration, as it may be difficult to separate the dominant role of the CEO or a founder member. Hence, the presence of a remuneration committee made up of non-executive directors and greater disclosure of directors' pay is necessary to monitor the management and prevent undue exercise of power by the executives.

#### **4.5: Combined Code of Corporate Governance (1998)**

The recommendations of the Cadbury Report, the Greenbury Report and the Hampel Report amalgamated to form a single report, the Combined Code. Based on the Hampel report in 1998, the Combined Code was divided into two separate levels: the first level consists of seventeen open ended Principles followed by a second level comprising of more detailed explanatory Provisions. Since 31 December 1998, the Combined Code was appended to the LSE Listing Rule 12.43A. The Code applies to all listed companies on the LSE main market with mandatory requirement for companies to provide in their annual report a narrative statement of how they have applied the Code principles, state that they have complied with the Code provisions or, if not, why not and for what period. Since the first publication of the Combined Code in 1998 it has subsequently undergone several revisions, for example, in the years 2003, 2006 and 2008. The Code had no legislative basis for enforcement, but failure to meet its requirements would mean delisting from the stock exchange.

By 2000, the responsibility of enforcing the Combined Code underpinning the '*conformance – disclosure obligation*' (see Moore 2009, 89) was transferred from the LSE to the FSA. The overall effect of the responsibility for ensuring best practice of corporate governance is the migration from a private sector initiative to a quasi-public institution.

#### **4.6: Turnbull Report (1999, 2006)**

The Turnbull Committee was established by the Institute of Chartered Accountants in England and Wales (ICAEW) to provide guidance on the Principle D.2 of the Combined Code 1998 – for companies to have appropriate internal controls. It includes that it is the responsibilities of the Director to ensure the efficiency of the internal control. Overall, the Turnbull report provides an explicit framework on internal control to which each company could model their own system. The ICAEW recognised the gap relating to the risk information within the annual reports and issued several discussion topics (1998, 1999, 2002 cited in Linsley and Shrives 2006, 388) encouraging UK listed company directors to report upon risks.

#### **Enron and the Financial Crisis**

The UK corporate governance code, mainly initiated by the private sector and based on the self-regulatory concept, was to avoid government legislation. However, this was not always effective. As the need for broad reforms became evident, governments began commissioning enquiries and reports into company law matters, especially from around the early 2000s. Senior industry figures appointed by government agencies led the government-initiated enquiries. For example, Lord Myners (the former chairman of Marks & Spencer), submitted a report in 2001 on institutional investors to HM Treasury. In 2003, the Higgs Report into the role of non-executive directors and audit committees report was commissioned by the UK Government, and in 2003, the Smith Report was also submitted to the UK Government after the failures of Arthur Andersen and Enron.

After the global financial crisis and the collapse of Lehman Brothers in 2008, the government initiated enquiries increased, but still wanted to avoid legislation as a reaction for company failures. For example, Sir David Walker 2009 review of the duties of directors of banks and financial institutions, strongly urged the adoption of non-legislative responses to the failure of directors and institutional shareholders. The report focuses on maintaining robust corporate governance standards such as ‘comply or explain’ approach

#### **4.7: Myners Report (2001)**

The Myners' report issued in 2001, by HM Treasury, concentrates on the trusteeship aspects of institutional shareholders, in particular, pension and life fund. The Myners' report recognises that management should be held accountable to the shareholders and that the institutional investors must look after the beneficiaries despite conflicts of interest.

#### **4.8: Sarbanes-Oxley Act 2002 (US)**

Following Enron's and other in the United States, the US Congress put into place new legal structures to increase investor protection and formed the Sarbanes-Oxley Act (SOX)<sup>12</sup> in July 2002. SOX imposes significant corporate governance, certification and disclosure requirements for the US and non-US companies listed on the national stock exchanges in the US as Brewer *et al.* (2010) suggest that SOX provides for a major regulatory system for accountants, independence, certification and attestation requirements. SOX saw the establishment of a '*quasi-public institution*' regulator for the accounting profession called the Public Company Accounting Oversight Board (see Srinivasan and Coates 2014). The corporate governance requirements include improving disclosure and financial reporting, requiring CEOs and CFOs to certify the accuracy of financial and other information in the company's reports. The SOX further includes mandates regarding the composition and functioning of the audit committee, forfeiture of CEO incentive compensation upon accounting restatements and prohibition of executive loans and non-audit services from auditors (Romano 2009, 232).

#### **4.9: Higgs Report (2003)**

The indirect effect of the scandals in the US and the creation of the Sarbanes-Oxley Act (2002) has been a catalyst for a host of reforms in Europe. There were strong concerns that the US style collapses and scandals did mimic in Europe and the UK. In addition, despite the adoption of the Combined Code, corporate failures

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<sup>12</sup> <http://www.sec.gov/news/press/2003-89a.htm>

continued in the UK. Further, the UK government was concerned about the implications of adoption of the SOX for British companies listed on the NYSE. In July 2002, the department of trade and industry and HM Treasury initiated a review of the Combined Code following a review of the Company Law. The UK government sponsored the Higgs review specifically on the role and effectiveness of non-executive directors. Higgs report made several significant recommendations to the Combined Code 1998, in particular, for the boards to consist of a majority of independent non-executive directors and to strengthen the roles of the audit and nomination committees. Higgs Report has strengthened the requirements of the Combined Code. Predominantly, the independence of non-executive directors, different individuals should hold the roles of the Chairman and the CEO and the directors' appointments should be transparent.

Higgs report is not without criticism as the Institute of Chartered Accountants in England and Wales (ICAEW) noted that while the Cadbury, Greenbury, Hampel and Turnbull reports combined produced 14 principles and 45 code points, whereas the Higgs review added just 1 principle but 37 code points suggesting that the code was excessively prescriptive (Jones and Pollitt 2004, 165). This arguably has had the effect of increasing the narrowness and strictness of the Code at the cost of its reputed flexibility.

#### **4.10: Smith Report (2003)**

Sir Robert Smith, Chairman of the Financial Reporting Council, published a report and proposed guidelines on 'Audit Committees'. This was in response to the failure of the audit committee in Enron. Both the Higgs and Smith recommendations are included in the revised Combined Code 2003. It applies to all listed companies on the primary market of the London Stock Exchange for reporting years commencing on or after 1 November 2003. The recommendation on the audit committee in both the US and UK avoids a loose definition for independence. For example, in the US the provisions of the Sarbanes-Oxley Act 2002 legislated that the audit committees should be wholly independent. Similarly, both the Smith and Higgs reports stressed the importance of independence of non-executive directors and have

emphasised that the audit committees should be comprised of wholly independent directors. Smith Report (2003) has expanded the roles of audit committees concerning financial reporting and external audit, bringing the UK policy on audit committees a step closer to that of the US Turley and Zaman (2004, 306).

In the Combined Code 2003, which followed the publications of the Higgs and Smith reports, the compliance task has been complicated with the addition of a third layer of norms in the Code's regulatory structure. Hence, boards have to adopt the regulatory structure at three hierarchical levels: main principles, supporting principles and provisions. Moore (2009, 89) states the Code lacks guidance on the precise interaction between the three levels; however, it does reiterate the continuing listing requirements for the companies.

#### **4.11: The Tyson Report (2003)**

The Tyson Report (2003) seeks to broaden boardroom diversity and inclusivity, by encouraging non-executive directors to be drawn from diverse backgrounds thus representation of a wider group of external constituencies. This represents a shift from a shareholder focused towards a stakeholder approach to corporate governance.

#### **4.12: UK Companies Act (2006)**

A new Company Law enacted in the UK in 2006 is the largest single piece of legislation and has 1,300 provisions and multiple schedules (Tomasic 2011; Ahern 2014). UK has been affected by European law reforms due to its membership of the EU in areas of EU Company Law Directives and EU corporate governance. Although the 2006 Act adoption of new principles allowing simplification of the company law and reduction of regulation specifically for the smaller companies but there is still uncertainty regarding corporate governance. In respect of general corporate governance the Companies Act 2006 are set out in sections 172-174. For example, Section 172 specifies the duty to promote the company's success. Section 173 provides that directors to exercise independent judgement at all times. Section 174 provides that directors must exercise reasonable care, skill and diligence in

everything that they do. One of the striking developments of the Companies Act 2006 is to foster the longer-term success of the company when making decisions and to do so by having regard to various stakeholder considerations. As Tomasic (2011, 59), states that the stakeholder perspective although symbolic, but an important development in company law.

#### **4.13: EU Directive**

The EU Commission amended the Fourth and the Seventh Company Law Directives, providing that listed companies should publish a '*corporate governance statement*', either as part of the company's annual report or in a separate report<sup>13</sup>. The directors will need to include reference in respect of the mandatory corporate governance code; however, company law may allow a reference to a voluntary code. The statement should include information about the corporate governance practices applied beyond the requirements under national law. In addition, the statement will address any deviation from the 'comply or explain' approach to the governance code to specific provisions and the code as whole. The Directives also require information on the company's internal controls and risk management systems, anti-takeover protection and shareholders' exercise of voting rights. The Directive further calls for liability for board members for the corporate governance statement and penalties applicable to infringements of the implementing national provisions (Wymeersch 2006, 135).

The UK implemented the Eighth Directive through Part II of the Companies Act 1989. The 1989 Act s27 specifies cases in which a person would be ineligible to act as auditor, thus implementing Article 24 of the Directive, which gives scope to define lack of independence to the Member States.

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<sup>13</sup>Company law: annual accounts and consolidated accounts of certain types of companies (amend. Directives 78/660/EEC, 83/349/EEC, 86/635/EEC, 91/674/EEC) , [http://eur-lex.europa.eu/smartapi/cgi/sga\\_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=EN&numdoc=32006L0046](http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=EN&numdoc=32006L0046), accessed 15 May 2014.

The European Union has a significant influence on the corporate governance in the UK. The European Commission's 'Corporate Governance and Company Law Action Plan (2003) proposed both legislative and regulatory measures which will affect all member states on the following issues: disclosure requirements, exercise of voting rights, cross-border voting, disclosure by institutional investors, and responsibilities of board members.

### **Banking and the Financial Crisis**

In 2008, the sub-prime mortgage practices and banking crisis raised serious doubts about the efficiency and legitimacy of the corporate governance system and the integrity and accountability of its actors (Conyon *et al.* 2011a; Haxhi *et al.* 2013). In 2008 to 2009, the banking crisis resulted in the UK government owning dominant stakes in large banks, HBOS/Lloyd's, TSB and the Royal Bank of Scotland and the nationalization of the assets of a couple of smaller failed banks, Northern Rock and Bradford & Bingley (Cheffins 2010). Hence, the following reports may be contributory to the reforming of governance factors that will help avert the financial crisis of 2008-2009 in the future.

#### **4.14: The Walker Review (2009)**

Although UK has strong investor protection rights and good governance, however bank governance in the UK is partly to blame for the financial crisis. As a result, Sir David Walker chaired a government commissioned report on corporate governance of British banks, and published a report in November 2009. Interestingly, the Walker report recommends the use of 'soft law' such as corporate governance codes to deal with failures on the part of company directors of banks and financial institutions, but can apply more generally to all listed companies. The 'comply or explain' approach to the Combined Code is reaffirmed and considered fit for purpose, even though a shift in emphasis to 'apply and explain' is suggested. However, the FRC argues that the 'comply or explain' approach is the trademark of corporate governance in the UK.

#### **4.15: The UK Stewardship Code (2010, 2012)**

The origin of the Stewardship code was initiated by the Institutional Shareholders Committee<sup>14</sup> report of 2002 entitled, ‘Responsibilities of Institutional Shareholders and Agents’. The Walker Report (2009) recommended the FRC’s remit to extend the code of best practice in stewardship to institutional investors and fund managers. Walker envisaged that the fund managers should voluntarily commit to a stewardship obligation, or explain why they were unwilling to make such a commitment. The first UK Stewardship Code (hereinafter Stewardship Code) for institutional investors was published in July 2010. FRC includes within their definition of institutional investors to include the asset owners and asset managers with equity holding in UK listed companies. As with the UK Corporate Governance Code, the Stewardship Code should be applied on a ‘comply or explain’ basis. In reporting terms, this entails providing a statement on the institution’s website that contains a description of application of the Code, or an explanation for deviations from any elements of the Code. Institutional shareholders are required to commit to public disclosure of their policies on stewardship responsibilities, active monitoring of the investee companies, provision of guidelines for active intervention with the investee company, act collectively with other investors and report periodically on their stewardship and voting activities.

The new Stewardship code (2012) revised from its previous version in 2010. The 2012 Stewardship Code revisions include clarifying the meaning of stewardship, and the respective responsibilities of asset owners and asset managers; and asking investors to disclose their policy on stock lending and whether they recall lent stock for voting purposes<sup>15</sup>.

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<sup>14</sup> <https://www.frc.org.uk/getattachment/e2db042e-120b-4e4e-bdc7-d540923533a6/UK-Stewardship-Code-September-2012.aspx>, page 2

<sup>15</sup> [http://www.grant-thornton.co.uk/Global/Publication\\_pdf/Corporate\\_Governance\\_Review\\_2012.pdf](http://www.grant-thornton.co.uk/Global/Publication_pdf/Corporate_Governance_Review_2012.pdf) accessed 13 December 2013

#### **4.16: The UK Corporate Governance Code (2010, 2012)**

In April 2012 the FRC issued a consultation document and the revisions are now included in the UK Corporate Governance Code (2012). These revisions include, for example, boardroom diversity (gender and ethnicity), and its progression report on an annual basis<sup>16</sup>. In addition, the board to confirm that it has considered the annual report and accounts, taken as a whole, to be fair and balanced; audit committees to disclose more information about their activities and the FTSE 350 companies to put the external audit contract out to tender at least every 10 years<sup>17</sup> (UK corporate Governance Code 2012, p.19, s3.7). In May 2013, the Quoted Companies Alliance (QCA) issued their own code aimed at the small and mid-sized quoted companies, which includes the AIM.

#### **4.17: Davies Report (2011, 2012)**

Lord Davies, on 26 March 2014<sup>18</sup> published the third annual review of women on UK boards. Three years on from the first review in 2011, Lord Davies' report, women on boards, reviewed the current situation on UK boards (FTSE 350) and considered the business case for having gender-diverse boards was now seeing a culture change. Since the first report, several follow-up reports published, indicate positive improvement in women's representation in the boardroom.

Since 2011, a number of recommendations are in place. These include, for example, that all Chairmen of FTSE 350 companies should set out the percentage of women that they aim to have on their boards in 2013 and 2015; and the FTSE 100 companies should aim for a minimum 25 per cent women in the boardroom by 2015 although many might achieve a higher figure. Quoted companies should disclose annually the proportion of women on the board, women in senior executive

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<sup>16</sup> Recommended by Lord Davies in his 'Women on Boards' report published in February 2011; [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/31480/11-745-women-on-boards.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31480/11-745-women-on-boards.pdf) ; accessed 13 December 2013

<sup>17</sup> <http://www.frc.org.uk/Our-Work/Publications/Corporate-Governance/Feedback-statement-on-UK-Corporate-Governance-Code.aspx>, accessed 24 January 2014

<sup>18</sup> <https://www.gov.uk/government/collections/women-on-boards-reports>

positions, and female employees in the organisation as a whole. Furthermore, the recommendation that the FRC amend the UK Corporate Governance Code to require listed companies to establish a policy on boardroom diversity, including measurable objectives for implementing the policy, and annually disclose a summary of the policy and the progress made towards achieving the objectives. This recommendation is now largely complete.

For the AIM companies, it is still rare to have women sitting on the board. It is important for the QCA to say that they will not shy away from emphasising the importance of diversity for small and mid-sized companies.

#### **4.18: Good Corporate Governance Worldwide**

The development of corporate governance codes in the US began far earlier than in the UK. In January 1978, the Business Roundtable issued a report on ‘The Role and Composition of the Board of Directors of the Large Publicly Owned Corporation’. According to Monks and Minow (1991), this was aimed at criminal corporate behaviour and to legislate limiting hostile takeovers and empire building by the management.

In 1989, the Hong Kong Exchange issued its first Code of Best Practice, Listing Rules, followed by the Irish Association of Investment Managers who drafted a Statement of Best Practice on the Role and Responsibility of Directors of Publicly Listed Companies (Aguilera and Cuervo-Cazurra 2004, 418). Table 4.3 shows the emergence of governance codes by country. Aguilera and Cuervo-Cazurra (2004, 434) contra indicative to their hypothesis find that there was more likelihood for developed countries with a common law legal status to develop governance codes compared to countries with a civil law legal status. The former legal system is characterised as having greater protection for minority shareholders and higher liability standard for directors and managers. The two legal systems are further discussed in Chapter 5, s5.7.

**Table 4.3: Worldwide Codes of Corporate Governance (CG) Practice or Policy**

Country	Year of First Governance Code	Legal Origin (Claessens and Yurtoglu 2013)	Issuer of last code	Influential/ Specific Name	Comply or Explain <sup>19</sup>	Board Structure Unitary
Australia	1995	British	ASX Corporate Governance Council	Bosch Report	Yes	Yes
Austria	2002	German	Austrian Working Group for Corporate Governance	Austrian Code of CG	Yes	Two-tier
Belgium	1995	French	Corporate Governance Committee	Cardon Report	Yes	Yes
Brazil	1997	French	Instituto Brasileiro de Governanca Corporativa	Code of Best Practice in CG	Yes	Two tier
Canada	1994	British	Toronto Stock Exchange	Dey Report(1994), Saucier Report (2001)	Yes	Yes
China	2002	German	China Security Regulatory Commission	Code of CG for listed companies in China	Yes	Two tier
Denmark	2000	Scandinavian	Copenhagen Stock Exchange Committee on Corporate Governance	Norby Commission	Yes	Two tier
Finland	1997	Scandinavian	HEX Plc, Central Chamber of Commerce of Finland Confederation of Finnish Industry and Employers of Finland Confederation of Finnish Industry and Employers		Yes	Yes
France	1995	French	Association Française des Entreprises Privées	Vienot Report I and II, Bouton Report	Yes	Unitary/Two tier
Germany	1998	German	Government Commission German Corporate Governance Code	Cromme Code	Yes	Two tier

<sup>19</sup>The European Commission mandated the use of the comply or explain principle through the 2006/46/EC after having performed a comparative study on corporate governance codes in Member States (Gregory 2002), [http://ec.europa.eu/internal\\_market/company/docs/corpgov/corp-gov-codes-rpt-part1\\_en.pdf](http://ec.europa.eu/internal_market/company/docs/corpgov/corp-gov-codes-rpt-part1_en.pdf).

Country	Year of First Governance Code	Legal Origin (Claessens and Yurtoglu 2013)	Issuer of last code	Influential/ Specific Name	Comply or Explain <sup>19</sup>	Board Structure Unitary
Greece	1999	French	Federation of Greek Industries	Principles on Corporate Governance in Greece	Yes	Yes
Hong Kong	1989	British	Stock Exchange of Hong Kong	Code of Best Practice	Yes	Yes
India	1998	British	Securities and Exchange Board of India	Kumar Mangalam Committee	Yes	Yes
Ireland	1999	British	Irish Association of Investment Managers	Corporate Governance, Share Option and Other Incentive Schemes	Yes	Yes
Italy	1998	French	Committee for the Corporate Governance	Draghi Reform, Preda Report	Yes (hybrid)	Yes
Japan	1997	German	Tokyo Stock Exchange		No	Two tier
Malaysia	2000	British	Securities Commission Malaysia	Malaysian Code on CG	Yes	Yes
Mexico	1999	French	Mexican Stock Exchange	Código de Mejores Prácticas Corporativas	Yes	Yes
Netherlands	1996	French	Corporate Governance Committee	Peters Report; Tabaksblat Code	Yes	Two tier
Portugal	1999	French	Comissão do Mercado de Valores Mobiliários	Recommendations on Corporate Governance	Yes	Yes
Singapore	1998	British	Council on Corporate Disclosure and Governance		Yes	Yes
South Africa	1994	British	The Institute of Directors of Southern Africa	King Report , I And II	Yes	Yes
South Korea	1999	German	Committee on Corporate Governance	Code of Best Practice for CG	Yes	Yes
Spain	1996	French	Instituto de Consejeros-Administradores	Olivencia Report	Yes	Yes
Sweden	1994	Scandinavian	The Codes Group		Yes	Yes

Country	Year of First Governance Code	Legal Origin (Claessens and Yurtoglu 2013)	Issuer of last code	Influential/ Specific Name	Comply or Explain <sup>19</sup>	Board Structure Unitary
Thailand	1998	British	Stock Exchange of Thailand	The SET Code of Best Practice for Directors of Listed Companies	Yes	Yes
United Kingdom	1992	British	The Financial Reporting Council	Cadbury Report; Combined Code	Yes	Yes
United States	1978	British	New York Stock Exchange	Statement on CG	Mandatory	Yes

*Sources: Gregory (2002) ; OECD 2003; Aguilera and Cuervo-Cazurra (2004, 298); Monks and Minow (2004, 298); Clarke (2007a); Solomon (2007, 188); Solomon (2010); Aguilera and Cuervo-Cazurra (2009); Claessens and Yurtoglu (2013). [http://www.ecgi.org/codes/all\\_codes.php](http://www.ecgi.org/codes/all_codes.php) accessed 20 March 2014*

#### **4.19: Success of the UK Corporate Governance**

FTSE -Institutional Shareholder Services' Corporate Governance Index Report (2005) and Governance Metrics International (2005) using corporate governance score show the UK ranking as one of the top countries. Weir and Laing (2000); Conyon and Mallin (1997) show that the UK publicly listed companies show strong compliance with the Combined Code's recommendations, despite the voluntary nature of the adoption of the Combined Code's recommendations. Weir and Laing (2000) using 200 UK companies for the period 1992 to 1995 show that the market returns were higher for companies complying with the Cadbury Report and establishing a compensation committee. Dahya et al. (2002) show that the adoption of the Cadbury Report in 1992 increases Chief Executive Officer(CEO) turnover in the UK.

#### **4.20: Discussion and Analysis**

The UK approach of corporate governance is principle based and this approach is in contrast to the US legal rule based. The series of reports produced in UK to the current Code (2012) have maintained the 'comply or explain' approach. The confidence in the UK codes provide a benchmark against which standards of corporate governance recommendations in other markets, such as EU member states and other OECD countries have adopted the principle based approach.

Although the compliance with the UK corporate governance code is voluntary, however evidence suggests that the majority of the listed companies in the UK adopt the Code recommendations. One of the reasons is due to demand by market forces to comply with legitimating practices, and, in addition, London Stock Exchange listing rules require these companies to comply with all the recommendations or justify reasons for non-compliance in their annual reports. This quasi-legal rule of 'comply or explain' acts as a prescriptive, mandatory disclosure requirement, and its attractiveness extends to the OECD countries and others.

Governance mechanisms can be categorised into two groups: internal and external. Internal mechanism includes CEO/Chairman duality, the proportion of non-

executive directors, debt financing and executive director shareholdings. External mechanism is the market for corporate control (Jensen, 1986). Conyon and Mallin (1997); Weir *et al.* (2002) show that the UK companies compliance with the code's recommendations, in particular, separation of the roles of the CEO and Chairman, the percentage of non-executive directors on the unitary board, and the presence of board subcommittees such as audit, compensation and nomination committees have increased. This suggests that within the UK main market governance places emphasis on the internal structural governance mechanisms (Weir *et al.*, 2002:580). In another publication by Weir *et al.* (2005) they find that governance mechanisms vary between companies going private and those remaining listed. They find that companies going private tend to have higher CEO and institutional share ownership, more duality and lower Tobin's Q ratio. However, they find that the presence of non-executive directors and independent directors was statistically insignificant. For the AIM companies, Mallin and Ow-Yong (2012) suggest that internal board dynamics such as board size and independent non-executive director exert a greater influence on disclosing compliance with Quote Companies Alliance guidelines than ownership related factors.

The corporate governance reforms discussed above contribute to developing and formalising structures and norms. Although, the board adopts the UK Corporate Governance Code's recommendations, however the principle-based criteria suggest that the actual practices can be tailored to the needs of the management. For example, the use of a single individual for the roles of the CEO and the Chair or having only two board committees instead of the recommended three board committees. Although this is not recognised as good governance practice, nevertheless, for the AIM companies it may be appropriate that the roles of the CEO and Chair are combined and discloses two board committees. The UK governance codes consistently call for giving priority to shareholders' interests while concede to the interests of other stakeholders.

#### **4.21: Conclusion**

This chapter traces the development of corporate governance codes to the current UK Corporate Governance Code (2012). The companies on the LSE's main market must abide by the UK Corporate Governance Code using the 'comply or explain' approach. This is in contrast to the AIM companies, which are not required to follow the Code. As a minimum, the AIM companies have to follow the Quoted Companies Alliance (QCA) guidelines, which are drawn from the UK Corporate Governance Code, thus providing legitimacy. Chapter 6 discusses further the application of the QCA guidelines for the AIM companies. The role of the independent non-executive directors, a recommendation of the Cadbury Committee (1992) and Higgs Report (2003), is captured in the composite corporate governance score in Chapter 8 and in Chapter 9 as an explanatory variable for the determinants of ownership. Chapter 8 further examines the disclosure and transparency of key issues in corporate governance. The review of the UK Corporate Governance Code, suggests that even though AIM companies have a lower listing requirement than the main market, nevertheless adoption of appropriate governance structures and disclosures will benefit the shareholders. Chapter 6 will further discuss the role of nominated advisers, who ensure good governance in AIM companies. The nominated advisers advise companies prior to the listing on the AIM, and once quoted, during the duration of the company on the AIM. Chapter 9 further examines the determinants of ownership structure. The agency theory emphasises on disclosure, appropriate incentives together with publicly available information to mitigate the agency problems. The remuneration package forms an incentive to align the interests of the managers with that of the shareholders, yet there are variations in the pay and CEOs and executive board members receive high compensation even in poorly performing companies. Therefore, Chapter 10 includes the examination of the determinants of CEO remuneration in the AIM companies.

## **CHAPTER 5 THEORETICAL ASPECTS OF OWNERSHIP STRUCTURE**

### **5.1: Introduction**

This aim of this chapter is to examine two opposite systems of ownership structure: dispersed and concentrated ownership. The chapter also aims to explain the factors that may be important in suggesting that the presumed diffused ownership structure may not be present in the companies listed on the Alternative Investment Market (AIM). An understanding of the ownership structure is important to an appreciation of the role of agency theory and others in the development of the corporate governance recommendations, which may be applicable to the companies, quoted on the Alternative Investment Market within a specific legal system.

In Chapter 3, the theoretical importance of the owners of a company, the shareholders, for understanding corporate governance was established. Chapter 4 demonstrated the importance of shareholders in corporate governance codes, most of which are designed to ensure that managers run the company in the interests of the owners.

The discussion of ownership was originally part of the literature review for Chapter 9; however, ownership unifies the three empirical studies on AIM companies as an important variable. In Chapter 8, the construction of the corporate governance variable comes from the governance practices exhibited by the companies in the sample, but needs to consider ownership as a governance variable and if it can explain the adoption of better corporate governance structure. In Chapter 9, ownership concentration is the key factor into examining its impact on company performance. In Chapter 10, ownership acts as a control variable, since share ownership is important when considering the board remuneration as executive ownership stakes may determine the level of remuneration. Although, ownership concentration is the important and the central issue in Chapter 9, but this created an overbalance considering that ownership as the governance mechanism is a factor utilised in all three chapters. Ownership, therefore, merits a separate theoretical chapter.

The focus on corporate ownership is motivated by previous literature (Shleifer and Vishny 1997; La Porta *et al.* 1998, 1999, 2000, 2002) and theories that regard corporate ownership structures as one of the key determinants of corporate governance. The growth in the debate on the ownership structure extends beyond the Anglo-Saxon countries such as the United Kingdom and the United States to include the emerging markets often characterised with weak legal and regulatory framework, and undeveloped illiquid financial market. In the latter setting ownership, ownership structure becomes an important corporate governance mechanism. Hence, the ownership structure is regarded as a corporate governance variable. Empirical studies conducted have looked for a relationship between ownership structure and company performance and the reliability of the relationship between the two variables. On one hand, various studies have found a non-linear relationship suggesting that the ownership matters, but also who owns the shares may be influencing the company value. Alternatively, others have argued that the relationship is spurious and arises because of misspecification of the empirical tests.

Since this thesis concerns a particular market the national differences are covered briefly, except to the extent that literature on national differences prompts consideration of issues relevant to the AIM. For example, some AIM companies with concentrated ownership, the modified agency problem of '*expropriation of minority shareholders*' may be more significant than the normal agency problem of 'conflict between management and owners'. Nevertheless, this will matter only to the extent that it leads to observable differences in governance structures.

## **5.2: What Does Ownership Structure Mean?**

### **Concentrated Versus Dispersed (Narrow versus Wide) Ownership**

Ownership structure is important because it helps to explain the differences in national regimes of corporate governance. The primary difference between ownership structures of companies in most developed countries tends to fall between dispersed and concentrated ownership systems. Interestingly, the majority of researchers classify ownership structure as either dispersed or concentrated without providing a definition of it. A problem often noted is that within a country, both

types of corporate ownership structures may be present among the listed companies, and this is becoming especially obvious in the US (Holderness 2009).

Coffee (2001, 3) provides a distinction between the dispersed and concentrated ownership structures and links with particular types of financial systems as follows:

*'A Dispersed Ownership System, characterised by strong securities markets, rigorous disclosure standards and high market transparency, in which the market for corporate control constitutes the ultimate disciplinary mechanism.'*

*'A Concentrated Ownership System, characterised by controlling block holders, weak securities markets, high private benefits of control, and low disclosure and market transparency standards, with only a modest role played by the market for corporate control, but with a possible substitutionary monitoring role played by large banks.'*

### **5.3: Other Classifications of Corporate Governance Systems**

Claessens *et al.* (2000, 94) classifies companies as widely-held corporations, (a term that refers to a corporation that has many shareholders and these shareholders/owners do not have significant control rights), or non-widely held corporations (see Treynor 1981, 68). As per the Berle and Means concept of 'separation of ownership and control', in the widely held companies it is realistically difficult to assume that the interests of the principals (owners) and the agents (management) are the same. In particular, some argue, that the management who are in control of the company may not share the same financial objectives of the principals.

Franks and Mayer (1997, 31) use a different categorisation for the corporate governance system. Franks and Mayer (1997) polarise corporate governance system loosely into two forms: the '*insider*' and the '*outsider*' models. These two extreme groups have now become a generally accepted means of categorising corporate

governance systems. An insider corporate governance system is one in which the listed companies are owned and controlled by a small number of major shareholders, such as founding families. In contrast, the outsider corporate governance system is the one where the managers control their companies and the outside shareholders own it.

Germany and Japan are examples of '*insider*' corporate governance system. The agency problems can reduce because of the close relationship between owners and managers (often they are the same). Another example is the Dutch corporate governance system, characterised by large block holdings by institutional investors such as banks, insurance companies and pension funds (Bezemer *et al.* 2011). Institutional shareholders help to mitigate agency problems, as they have the resources to monitor managers. However, there are other problems related to the power exerted by large shareholders, for example, due to information asymmetry between the large shareholder(s) and the minority shareholders, or controlling shareholder remains passive. Therefore, the most important agency problem with insider corporate governance system is the expropriation of outside shareholders by a controlling shareholder (Faccio *et al.* 2001, 55; Shleifer and Vishny 1997).

The extent to which the insider/outsider polarisation of corporate governance systems may have arisen could be due to differences in ownership structures, culture, politics and legal frameworks (Solomon 2010, 182).

#### **5.4: Different Types of Owners**

There are obvious variations in the ownership pattern of corporations across countries. In the UK and the US, the ownership structure of large companies is widely dispersed among many institutions and individual investors. In the UK, over the past 50 years, there has been a gradual shift of ownership from individuals to investment institutions. The proportion of institutional shareholdings in UK listed companies has grown and they now represent the dominant shareholder group (Solomon 2007, 111). In the UK, the four main types of institutional investors are pension funds, life insurance companies, unit trusts and investment trusts. At the end of 2012 UK individual owned 10.7% by value, insurance companies held 6.2% of

share ownership, pension funds held 4.7%, unit trusts held 9.6% and other financial institutions held 6.6%.<sup>20</sup>

In most of continental Europe and other countries, ownership is much more concentrated. Large shareholdings tend to be held by different types of owners: family, government, management, financial institutions, foreign investors and other corporations.

## **5.5: The Ownership Structure Analysed at Country and Company Levels**

### **Country Level**

At the country level, ownership structure helps to explain differences in national regimes of corporate governance, for example, Coffee's (see above s. 5.2) distinction between dispersed and concentrated ownership structures and links with particular types of financial system. The argument is that there are dominant common systems of corporate ownership that affect the nationwide (regulatory) system of corporate governance. Since, this thesis is based on a specific market; the national differences are covered briefly, except to the extent that literature on national differences prompts consideration of issues relevant to AIM. For example, some AIM companies with concentrated ownership, the modified agency problem of '*expropriation of minority shareholders*' may be more significant than the normal agency problem of '*conflict between management and owners*'. Nevertheless, this will matter only to the extent that it leads to observable differences in governance structures.

Prior research on country level studies of corporate ownership has questioned the existence of different corporate ownership patterns observed in different countries. Durnev and Kim (2005, 1462) consider the importance of country level studies in understanding the '*regulatory environment*', since empirical evidence

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<sup>20</sup> [http://www.ons.gov.uk/ons/dcp171778\\_327674.pdf](http://www.ons.gov.uk/ons/dcp171778_327674.pdf), accessed 16 August 2014

shows extensive within-country differences in corporate governance and disclosure practices. They conclude that there is a positive association between corporate governance practices and growth opportunities, external finance needs and concentration of cash flow rights. In addition, they find that concentrated ownership acts as a mechanism to mitigate agency conflicts between controlling and minority shareholders when investor protection is weak (p.1488).

According to Bebchuk and Roe (1999, 133) both the UK and US are characterised as having diffused ownership structures compared to other developed economies, in particular continental Europe, which shows concentrated ownership. Empirical researchers have compared corporate ownership around the world, and find evidence of a high incidence of controlling shareholders, (for example, La Porta *et al.* 1999). For the AIM companies the agency problem is not the separation of ownership and control, but rather that between the shareholders and controlling shareholders who have nearly significant control over the managers.

Other studies, such as La Porta *et al.* (1998); La Porta *et al.* (1999) explain the difference in ownership structures between different countries from a legal perspective (see section 5.8 for more details), where they argue that the degree of investor protection rights and its enforcement is a determinant of ownership structure.

### **Company Level**

This thesis addresses the question of whether an individual or a group of individuals who owns a company's shares influences the market value and its performance. These groups include managers and board members, shareholder who owns a large single block of shares (can be insider or outsider shareholders). The outside shareholders may also be institutional shareholders. Another common group of shareholders is the family, who also hold significant share holdings or use professional managers and are now passive shareholders. It is also possible that a founder/family member continues to be an active manager. Regardless of the type of

shareholder, for the AIM companies, the question is whether the ownership matters and if they increase or decrease company value.

Much of the theoretical work on whether ownership influences the company's value and performance begins from Berle and Means (1932) work on the separation of ownership and control. Thereafter, much of the research work focuses on Jensen and Meckling's (1976) analysis on whether an optimal fraction of equity exists that the owner manager can issue to outside shareholders.

Morck *et al.* (1988) argue that increasing the proportion of shares owned by managers closely aligns the interests of the managers with those of the shareholders. However, at substantial higher levels of ownership the managers become entrenched. The empirical works that addresses the above circumstance include Morck *et al.* (1988); McConnell and Servaes (1990), Short and Keasey (1999).

## **5.6: What Does Theory Say About Ownership Structure?**

With ownership structure, it is now common to describe it in terms of the classical principal-agent theory at the individual company level, which includes the separation of ownership and control, an issue brought to the fore so effectively by Berle and Means (1932). Their analysis on '*modern corporations*' became the dominant understanding of dispersed ownership, with ownership divorced completely from the control, where management controlled the corporations, often without ownership shareholdings, in contrast to the traditional businesses controlled by the owners. Consequently, this creates the traditional quandary of principal-agent relationship, how to guarantee that agents act on principal's behalf and not in their own self-interest.

From the time of Berle and Means' work and 1970s there was little empirical research on ownership, which also may be one of the reasons for the acceptability of dispersed ownership. However, in the 1970s there was a revival of the ownership research using mainly hand-collected data of the largest corporations. Larner (1966)

following the Berle and Means study measure the extent to which ownership control actually exists among the 200 large non-financial corporations in 1963. His evidence suggests that the corporations have grown to such a size that for the majority of the corporations, an individual or a group will be financially constrained to control these large corporations. As per Berle and Means (1932) study, many authors analyse the control problems that arise when ownership is dispersed, for example, (Manne 1965; Alchian and Demsetz 1972; Fama and Jensen 1983b). As more commercially available ownership data became available in the late 1970s and early 1980s, doubts were raised regarding the existence of the diffused ownership structure (Eisenberg 1976; cited in Holderness 2009, 1402).

The lack of international comparative research before the late 1990s is appropriately described by Macey (1999) who suggests that a lack of development of generally accepted criteria to measure appropriately alternative systems of corporate governance has limited international comparative research check citation. Then with a series of La Porta *et al.* studies and Claessens *et al.* studies, it has seen the development of interest in ownership structure at country level and company level and other factors that influence corporate ownership structures. The aim of both these sets of studies was to try to understand in a comparative perspective the national differences in corporate governance regimes and (though to a lesser extent) intra-country variation. One of the key variables they identified to explain national variation was the different forms and structures that corporate ownership took in different countries.

Classical property rights theory defines ownership as residual rights to income, while modern property rights theory equates ownership to residual control rights, that is, 'the rights to make decisions in circumstances not fully foreseen by the contract' (Shleifer and Vishny 1997, 741). Both residual rights to income and residual control rights are important in explaining ownership, in particular, when the contracts are not complete. Challenges to the classical theory on ownership structure to enhance the corporate governance, both theoretical studies, argue that there are mechanisms that counteract the agency effects of dispersed ownership, and empirical studies show that in practice, dispersed ownership is less common than the literature

has suggested even in economies such as the UK and the US. Hence, researchers have the challenge to theorise, to test empirically the national diversity in ownership structure and to identify key factors explaining these differences. For example, the studies by La Porta *et al.* have questioned the dispersed ownership structure as the norm. La Porta *et al.* (1999, 498) suggest that using a lax measure for definition of control for medium sized companies, makes '*dispersed ownership truly an exception*'.

Grossman and Hart (1980) show that if a company's ownership is widely dispersed, no individual shareholder has sufficient motivation to monitor the management personally as benefits for any single shareholder is too small to cover the monitoring cost. Shleifer and Vishny (1986) developed a model to demonstrate that some degree of ownership concentration is desirable in order for the market for corporate control to work effectively. Presence of large shareholders may mitigate agency problems between the management and shareholders because of large equity holdings providing the large shareholders with incentives to keep the management under observation. Subsequently, large shareholders provide monitoring at levels that would be otherwise impossible to reach in diffusely held companies. On the other hand, the presence of large shareholders may give rise to conflicts between the majority shareholder and the minority shareholders because the former are able to exercise control over the company and extract benefits, resulting in '*expropriation of the minority shareholders*' (La Porta *et al.* 2002, 1163).

## **5.7: Factors That Can Explain Variations in Ownership Structure**

### **Legal System**

According to the legal origin claim, an explanation of the variations at country level is due to the influence of the presence of either '*common law*' or the '*civil law*' systems (La Porta *et al.* 1997; La Porta *et al.* 1998; Roe 2006). The law and finance stress the autonomous role of law and regulation, as been apart from political processes (La Porta *et al.* 1998). In a more narrow sense, autonomy has to do with the protection and self-determination of minorities. It focuses the law to those that deal explicitly with the organisation of the firm, the securities regulation and finance to argue that where minority shareholders protection is provided by the

law, the tendency is to find higher propensity for diffused ownership. Therefore, to explain the higher level of minority shareholders' protection the law considers the legal family, that is, common law versus civil law. Shleifer and Vishny (1997) argue that the law and regulation can help protect shareholders, and this is most likely where there is a common law. The common law is the legal system in the US, UK and most Commonwealth countries. In contrast, the civil law is the legal system of Continental Europe and most of the rest of the world, which is governed by codes of law, having their origins in Roman law. The link between legal origins and financial markets, according to the La Porta *et al.* studies, suggest that the degree of investor protection of small investors within a country is influenced by the origins of the legal system. In terms of legal origin, La Porta *et al.* focus on the difference between countries that have common law and French civil law tradition. They show that the common law countries offer greater protection for the minority shareholders' rights, which benefits the financial market development. Roe (2006) considers that the legal protection is important, and the 'common law via its use of fiduciary duties' is structurally more appropriate in protecting minority shareholders compared to the civil law. In contrast, the French civil law countries are characterised by weak minority shareholders' rights, and consequently, resulting in a less efficient and functional equity market. From the above, based on the level of protection afforded to minority shareholders, will determine the pattern of ownership structure, that is, diffused or concentrated shareholders. One of the reasons is that if outsiders do not buy shares, then a deep stock market does not develop, and the large owners such as founding families are locked in (see Roe 2006, 470). However, both legal systems can go either way, with the USA's Sarbanes Oxley Act being quite directive, while Germany is shifting to the more transparent 'comply or explain' approach. Therefore, both common law and civil law seems to be converging with detailed statutes and regulation being the norm.

While the legal origin provides some answers, it still leaves some questionable issues. If civil law is characterised as having higher regulation, then why does it not provide higher shareholders' rights but promotes more block holdings? Despite criticisms of their work, La Porta *et al.*'s (1998) work is common in corporate governance research as a benchmark for classifying countries into legal

systems. La Porta *et al.* (2000) argue that international differences in financial development are distinguishable using the legal system. Based on an efficient functioning legal system of either the common law or civil law, effectively facilitates both market based and bank based financial systems. This is because finance constitutes defined contracts, and its effectiveness stems from the legal rights and enforcement mechanisms.

### **Political System**

Although there are many factors that may affect the structure of ownership, (for example, La Porta *et al.*'s legal environment) one cannot ignore the political system and history. For example, Roe (2002) provides a useful lens through which to differentiate national systems and argues that different ownership patterns prevail because of the choices in corporate structures and corporate law. Roe (2002) argues that the legal origins alone cannot explain variations in ownership structure, in different countries. For example, Germany and Scandinavia have strong quality of laws but exhibit more concentrated ownership. Roe (2002) suggests that politics may be a determinant of corporate governance.

Roe's argument for legal institutions as a direct result of politics is that countries exhibit diverse preferences in relation to the legitimacy of shareholder value and where countries consider shareholder value is legitimate, institutions help protect minority shareholders. By contrast, the deficiency of institutional arrangements that would protect the rights and promote the interests of minority shareholders in some countries reflects the lack of legitimacy. Although Roe's work does not fully explain whether regulation is inefficient and why it has not changed, this raises a further question as to whether political motivation exists to ensure an efficient system of corporate law. Roe further argues the relevance of legal institutions, which were introduced several hundred years to those that were developed more recently. The pervasive argument is how can one assume that codes such as that of Austria's 1786 Code of Joseph II and complete Civil Code of 1811 or France's Civil Code (known as the Napoleonic Code) of 1804, shaped by the Roman law tradition, as the models of civil law systems. Are these still as relevant in influencing the current economy compared to regulations that were introduced over

seventy years ago, such as the 1933 US Glass-Steagall Act? The scandals of prominent corporations such as Enron (see Bratton 2001), and Parmalat, Mannesmann and Vodafone takeover (Kolla 2004) and the public outrage on excessive managerial compensation (Bebchuk and Fried 2004) are all examples that serve to demonstrate the political implications of corporate governance regulation.

The reduced mandatory requirements for the AIM companies can be seen as a direct intervention of the government in the view that this will help economic development. However, the use of a particular mode of governance where the London Stock Exchange (LSE) performs the regulatory role has diverted the attention played by the government. AIM provides an interesting context for research as it falls under the influence of private rules and regulations, where the ‘Nominated Advisers’ (Nomads) act as the private regulator and ensure individual AIM companies adhere to the Quoted Companies Alliance corporate governance recommendations. The advantage of the private regulation is in its flexibility and enabling smaller companies to list and access capital markets with reduced costs and three years clean annual reports compared to a company wanting to list on the main market. As such, this flexibility by LSE will provide more companies to have access to the stock exchange and time to grow substantially prior to migrating onto the main market. As the UK is a member of the European Union (EU), much of the EU initiatives have an impact on the UK corporate governance. However, since AIM is an exchange regulated market, the European Union Directives on securities and the UK Corporate Governance code do not all apply.

## **Financing System**

Thirty years ago, Zysman (1983), cited in Nobes (1998, 166), has rapidly become the work of reference on the political economy of country financial systems, classifies the financial system at the country level into three main types: market-based, bank-based and government-based systems. Interestingly, the market-based and bank-based systems have become a major way in which financial systems are characterised. Most of the comparative studies have been rather narrow comparing a small number of countries, focusing mainly on Germany, Japan, the UK and USA. The bank-based financial system (dominated by banks and financial institutions) is found in European countries, for example, in Germany. The market-based financial system (dominated by securities) found in the US and the UK (Demirgüç-Kunt and Levine 1999), whereas, Japan and France characterised as a government-based systems.

Countries with market-based financial systems are more likely to have common law origins than countries with bank-based systems. The market based outsider systems have all or most of the characteristics of dispersed ownership, with an apparent separation of ownership and control, lower leverage and advanced financial markets. In this system, there is less incentive for outsiders to participate in the control of the corporation (Clarke 2007b, 101), stakeholders' interests are not formally represented, in contrast to the co-determination in German companies. German law provides for a system of 'co-determination,' or worker representation on the supervisory boards of large companies. This allows employees to have control rights through seats on the corporate board (Bucklew *et al.* 2013).

As Rajan and Zingales (1998) argue that a relationship based systems, for example, a bank based system) ensures a return to the finance providers - similarity in the definition of corporate governance by Shleifer and Vishny (1997) discussed in Chapter 2, this suggests that a return to suppliers of finance may be conducive to some form of power over the company. This form of power is when the financier has implicit or explicit ownership of the company, thus securing a return on their investment.

Rajan and Zingales (2001, 477) suggest that in countries with market-based systems, that is, in the UK and USA, the importance of venture capitalists as financiers with substantial control over the companies they finance has been growing. However, this relationship with the venture capitalist and the company is seen as a hybrid characterised as a relationship-based financing within a market based financial system. In this instance, the venture capitalist, in AIM companies acts as a bridge between the company and the market, reducing the illiquidity of the company, (often a problem associated in a bank-based system). The next stage for the venture capitalist after the initial financing of the company is to prepare for exit. They do this by improving and placing appropriate corporate governance structures so that the company is in a position suitable for investors to takeover, such as shift from a founder dependent run company to a company run by professional managers.

## **Culture**

Hofstede's (1984) has been influential in aiding identification of structural elements of culture and particularly, those which can have significant effects on behaviour in business issues. The four cultural dimensions identified were individualism, power distance, uncertainty avoidance and masculinity. Although the work of Hofstede has been criticised (see, for example, Hofstede 2003), nevertheless, culture can explain, in parts, some of the background factors leading to corporate governance and ownership structure. Hence, culture can explain certain corporate governance compliances, for example, regulation, discharge of accountability, and greater disclosure. The societal values of high collectivism, large power distance and strong uncertainty avoidance suggest that individuals would tend to adhere to rules and regulations and disclose less information voluntarily to the public. Furthermore, for financing of the companies, the long-term creditors in strong uncertainty avoidance countries may demand more information from their borrowers and have higher ownership concentration. Both the UK and US characterised by high individualism and low power distance, tend to be more transparent and disclose over that, which is required by the mandatory rules. The evidence for cultural impact on corporate governance has been observed within Asian countries, for example, the voluntary disclosure of corporate information is

not readily encouraged. Although researchers are paying more attention to culture and empirical evidence suggests that culture, religion, values and ethnicity are important determinants of ownership structure and corporate governance, most of the evidence is from the East Asian countries.

Haniffa and Cooke (2002) show that religion and ethnic differences in Malaysia influence corporate governance practices, specifically to the native Malays and Chinese in Malaysia. Uddin and Choudhury (2008) question the suitability of importing the Anglo-American style of corporate governance to less developed countries such as Bangladesh. They find that the western governance models are in conflict with the local cultures and values. They show that families have a dominant role in all aspects of corporate governance, for example, the board play a significant part in serving the interests of the families rather than those of the minority shareholders. Further, the families destabilize the government's power in enforcing governance regulation. Therefore, to force the implementation of independent directors on the board will work in its entirety in the UK, but not in the countries like Bangladesh.

### **Economic (Liquidity of the Stock Market, Inflation)**

Both economic and government policies in the majority of the countries suggest that ownership structure is important for economic performance. La Porta *et al.* (2002, 1164) argue that firm valuation levels are low in countries with small capital markets, further these show countries low investor protection rights and higher concentrated ownership. Hence, companies may find it difficult to raise external financing where the capital markets are small.

The differences in corporate governance structures exhibit different advantages and disadvantages. The US/UK model supports robust market orientation, with strong liquid capital markets. For example, AIM has grown considerably with a wide range of sectors that include the following: oil and gas, industrial, consumer goods, health care, consumer services, telecommunications,

utilities, financial and technology.<sup>21</sup> Maug (1998, 88) concludes that in stock markets with low liquidity there is dominance of small shareholders but the same investor will be diversified in more companies. Whereas, where stock markets are liquid, the large investors will contribute to more monitoring. On the other hand, if the ownership is concentrated among few shareholders the market has poor liquidity since the shares are not widely held.

Demirgüç-Kunt and Levine (1999) show insignificant correlation with inflation whether a country's financial system is bank based or market based, although high inflation economies tend to have underdeveloped financial systems. Moro Visconti (2011) empirically examines the effect of inflation and its impact on operating leverage and cash flow, and subsequently show it affects the relationship between different stakeholders within an agency theory framework.

### **History (Colonial Inheritance)**

The study by Nobes (1998), although published prior to 2000 and related to accounting systems, suggests one can extend his idea to corporate governance. Hence, that former colony will adopt the systems of the colonial parents, that is, the legal systems of the formal colonies are the legal systems of the colonial parents. As such, colonial inheritance is probably the major explanatory factor for the development of corporate governance system in many countries. Similarly to adoption of the financial reporting system adopted by pre-British colonies such as Kenya, Gambia, India and or French colonies such as Senegal and Cameroon. These countries commonly retain the wider system of law and cultural factors of its colonial inheritance. Likewise, Japan's structure of stock market and Securities Law are both influenced by the USA occupation during World War II.

### **Impact of Prior Corporate Scandals and Failures**

Major crisis has spurred regulatory intervention by the government. For example, the corporate failures of Enron, WorldCom and TYCO in the US has

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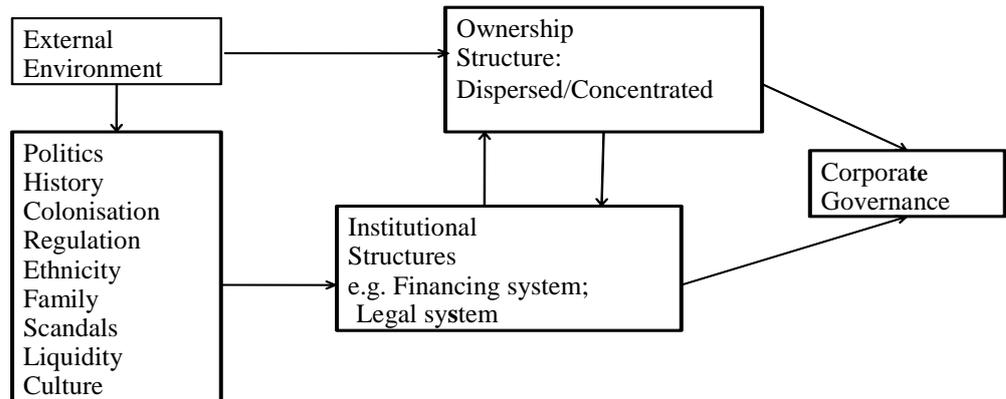
<sup>21</sup> <http://www.londonstockexchange.com/statistics/historic/aim/jan-2013.pdf>, p.15

criticised the quality of the corporate governance and the ability of the law to protect the minority shareholders from insiders' scheming (Roe 2006, 494). As such, the reactions to this crisis have seen more regulation of corporate governance legislation via codification and directive regulation. The US Sarbanes-Oxley Act 2002 is a good example of implementation of corporate governance codes as being mandatory. The Sarbanes-Oxley Act and new listing requirements have mandatory rules and companies listed on the US stock exchanges have to comply with them (MacNeil and Li 2006).

The development of corporate governance in the UK began with the Cadbury Report 1992, and since has resulted in substantive market and regulatory reform. Corporate governance reforms in other countries have lagged, for example, Germany's first corporate governance code arose in 1998 (see Table 4.3). The European Union may tend to foster some convergence among the corporate governance systems in Europe, but there are difficulties due to concentrated ownership by families as there are vested interests. One of the reasons is that the management may use their discretionary control in favour of the owning family and simultaneously ignoring the minority shareholders' interests. In addition, the block holder may oppose the need for higher transparency and disclosure. Disregarding the rights of the minority shareholders is a criticism of the governance systems that is often cited (see Lindahl and Schädewitz 2013, 253). The blockholder issue may be prevalent in the AIM companies and may worsen agency conflict due to information asymmetry between the blockholder and the minority shareholders in these companies.

The above sections have summarised different factors that may be an influencing factor on the two alternative forms of ownership structure that may be adopted, and this will in turn affect the adoption of best practice for corporate governance. The underlying philosophy of using the environmental factors (see Figure 5.1) in understanding the alternative forms of ownership structure will assist in mitigating agency problems and that managerial run companies will converge or adopt structures that within a self-regulated market will prevent any corporate governance failures.

**Figure 5.1: Environmental and Institutional Factors on Ownership Structure**



**Source: adapted from Nobes (1998, pg 163)**

### **Voting Versus Cash Flow Rights**

Voting rights are an important part of corporate governance, however, because they identify the extent to which shareholders can wield power over corporate activities (Shleifer and Vishny 1997, 751). Several studies have examined the separation between cash flow rights and voting rights. It is important to distinguish between ownership of voting rights and ownership of cash flow rights. Cash flow rights refer to claim on cash payouts and voting rights refer to, control, for example, have the right to influence corporate decisions that require shareholder approval such as electing the board of directors). Therefore, in a company with a single class of equity shares, cash flow rights and voting rights are equal, and when ownership is concentrated the owner will pro rata the shareholder's wealth and will have cash flow rights on a pro rata basis. In contrast, in several countries variable voting rights or dual class equity is a legal mechanism used by controlling shareholders. These can take the form of shares with limited voting rights and nonvoting shares.

La Porta *et al.* (1999); Claessens *et al.* (2000); Faccio *et al.* (2001, 55) suggest that the main agency problem outside the UK and the US is not the manager-shareholder conflict but rather the risk of expropriation by the controlling shareholder at the expense of minority shareholders. An important point to note is

that ownership structure data may be misleading if voting rights differ from cash flow rights (for example, existence of shares with more votes than usual). Literature suggests that outside of the US, due to a higher incidence of the largest shareholder, companies on the main stock exchange exhibit higher differences between cash flow rights and control rights compared to companies in the US. Complex control and ownership arrangements forms provide greater control or voting rights compared to their cash flow rights. In general, these arrangements may imply conflicts of interests (Belcredi and Caprio 2004, 172) between inside block holders who have higher voting and control rights, and typical structures include pyramids or cross shareholding structures.

Reasons for managers' motivation to hold shares in their company include, for example, residual cash flow rights, voting rights or a combination of both (see DeAngelo and DeAngelo 1985, 33). In the UK and the US, the main governance problem is between managers and outside shareholders, suggesting that the low management ownership of cash flow rights may be a source of agency problems. La Porta *et al.* (1999) definition of ownership is based on voting rights rather than cash flow rights. Investors have greater protection when companies have one share one vote rule as this ensures that dividend rights align to voting rights.

### **The cash flow rights**

Many European countries have unequal voting rights, as opposed to the one share, one vote norm. The former specifically used to protect family control and the enactment of one share one vote would dilute the control rights of the family groups. Hence, these groups will resist any changes. Some studies on cash flow rights are shown below:

Jensen and Meckling (1976) argue that the controlling shareholders with substantial cash flow rights are unlikely to expropriate corporate resources and consequently maximise minority shareholders value. In contrast, Morck *et al.* (1988, 294) suggest that increasing ownership for the management leads to entrenchment, where the manager may indulge in non-value maximising behaviour. The

entrenchment hypothesis predicts that the value of the company will be less when management is free from checks on their control.

Zingales (1994) show that managers issue and own shares with superior voting rights to achieve control rights that exceed their cash flow rights in the same company. This gives rise to agency problems. The controlling shareholders face strong incentives to monitor managers and maximise profits when they retain substantial cash flow rights, in addition to control (La, Porta, 1999). Bebchuk *et al.* (2000) describe the means by which pyramids and cross holding structures enable one shareholder to maintain complete control of the company while holding less than a majority of the cash flow rights. A gap between voting rights and cash flow rights can provide incentives for self-dealing, and predicts lower firm value (Claessens *et al.* 2002). Several methods are available where control exceeds cash flow rights such as pyramid structures in the East Asian companies, dual class shares with insiders retaining voting commons shares and outsiders holding preferred shares (Black *et al.* 2012)

Claessens *et al.* (2002) using eight East Asian countries, find that company value increases with the cash flow rights for the largest shareholders and decreases when the voting rights exceed cash flow rights. Lins (2003) using over 1,400 companies from 18 emerging markets finds that the company value is lower when voting rights exceed cash flow rights. He finds that higher managerial control in excess of the ownership is negatively associated to Tobin's Q (TQ) and the range of managerial control within 5 to 20 per cent shows a negative relation to TQ. This suggests that markets discount companies exhibiting managerial agency problems.

## **5.8: Conclusion**

This chapter has briefly traced the factors that support corporate governance characteristics for ownership concentration and the legal influence on investors' protection. The common form of influence according to the La Porta studies on the legal system of the country. However, Lindahl and Schädewitz (2013) criticise the method and inference of the La Porta *et al.* (1998) study, nevertheless the La Porta

studies have allowed the generation of comparative research involving ownership and other factors. Despite the voluminous academic study on the distinction of common law and civil law systems, there is strong evidence that the differences between these two legal systems in the context of corporate governance are diminishing. Hence, countries are converging their governance systems, for example, the civil law countries are now accepting common law solutions (López de Silanes 2008, 327) and vice versa such as adoption of the ‘comply or explain’ concept and increasing shareholders’ rights.

The UK provides an excellent context in which to explore the nuances of the ownership and control concept (Cheffins *et al.* 2013, 672), specifically since the UK’s legal system operates within common law framework with a strong protection to minority shareholders. However, the nature of the AIM companies, suggests that the outsider system will exist in only a minority of the companies and the corporate governance system that may dominate is the insider system. It is likely that in some AIM companies, the founder member or the controlling shareholder will exercise considerable power. Chapter 6 considers descriptively AIM as an exchange-regulated market, which is unique in the financial markets as one of the few smaller stock exchanges that have been successful. Further, Chapter 9 examines empirically the determinants of ownership structure and its association with company performance.

## **CHAPTER 6     THE ALTERNATIVE INVESTMENT MARKET**

### **6.1: Introduction**

One of the main purposes for this chapter is to provide an understanding of the development of the Alternative Investment Market (AIM) since its inception in 1995. AIM companies are not required to adopt the recommendations of the UK Corporate Governance Code, this chapter will discuss how the use of a Nominated Adviser (Nomad) and the adoption of the Quoted Companies Alliance (QCA) guidelines can provide the governance for the smaller companies quoted on the AIM. In Chapter 3, the problems of conflict of interest between the shareholders and the management were discussed and it was highlighted that in the AIM companies the conflict of interest may arise between the blockholder and the minority shareholders. Chapter 4 discussed the institutional arrangement of the Corporate Governance Code reviews in the United Kingdom, the Code's recommendations and their adoptions provide legitimacy to the corporations. Prior to the 1980s, in the UK, companies could raise equity finance via the main stock exchange, but the listing onto the main market comes with strict entry requirements, high regulation and higher cost. Alternatively, companies could gain admission to the 'Over the Counter' (OTC). The OTC market was not attractive to all investor groups because of its apparent unregulated nature. The difference between an exchange, such as the London Stock Exchange (LSE), and an OTC is that the former provides a trading venue for assets that are by their nature simple and based on measurable parameters such as shares. Whereas the OTC offers a deep and liquid trading venue for major banks and financial institutions to execute transactions, which are not standardised, but individually negotiated.

The ability to raise long-term finance for small companies has been of concern in the UK for a long time. Furthermore, there was a decline in small companies applying for listing on the LSE. In the UK, to overcome the problems of the listing of small companies, a three-tier market covering listed and unlisted securities was introduced. The Unlisted Securities Market (USM), created in November 1980, formed a bridge between the main exchange and those on the new market for subsequent switch to the main market. The creation of USM was

motivated in response to small growing companies' concerns in respect of the high cost and strict regulations of London's main market, thereby making it difficult for the smaller companies to list. The USM allowed time and experience for the small companies to expand until they were substantially large to enter the main market, thus providing a direct foundation for the new listings to the main market.

Companies entering the USM were normally required to be trading for at least three years, and provide financial information for five years (or less if period of trading was shorter). USM's initial attraction was from the formerly traded OTC market and new entrants. The USM was initially successful as many new companies went public and sought listing of their shares on the USM.

Hutchinson *et al.* (1988, 17) found that companies quoted on the USM appeared to have low investment in current assets, higher growth rate and leverage. However, the recession of the early 1990s resulted in a reduction of the number of new listings, severely damaging the attractiveness of the USM. Furthermore, the listing requirements of the main market were relaxed, after the amendment of the EC Listing Particulars Directive in 1990. Thus the USM now provided little advantage for companies to list on the USM. This exacerbated the problems of financial liquidity for the small companies. Eventually in December 1993, the London Stock Exchange announced the closure of the USM; which was completed in 1996.

The closure of USM resulted in a gap as to how LSE could best serve the small and medium sized companies to gain access to public equity. Hence, the development of AIM as part of the LSE, a lower tier market, to provide less costly regulatory regime than the main market. A listing on the AIM acts as a stepping-stone to a listing on the main market in the UK and after 2 years on AIM, a company can seek admission to the main listing using a special accelerated procedure. In comparison to the LSE, which attracts large companies, AIM draws small and mid-cap companies. Trading venues such as AIM are classified as '*exchange regulated markets*' Grossman and Hart (1980, 262) and thus avoid the full force of European Union Directives on security market regulations. AIM's model exhibits lower listing standards and reduced ongoing requirements in comparison with the LSE's main market. Each company on AIM is overviewed by a Nominated Adviser (Nomad),

who coordinates the admission procedure, carries out due diligence to ensure that the company is suitable for listing on AIM and provides ongoing oversight.

Companies listed on the main market/Techmark have to provide information in English, are required to publish quarterly reports, and to publish financial statements based on international accounting standards. However, it is common practice for AIM companies to use International Financial Reporting Standards ('IFRS')<sup>22</sup> for reporting. Issuers on AIM that are incorporated in the European Economic Area and that are parent companies are required by AIM Rules to apply IFRSs from financial years commencing on or after 1 January 2007. Table 6.1 shows the variations in communication to the users between the different exchanges in the UK.

**Table 6.1: Information Requirements for Listed Companies in the UK**

	<i>Accounting Standards</i>	<i>Quarterly Reports</i>	<i>Disclosure of significant news</i>
LSE Main market	IFRS, 2005	Yes	Yes
USM, 1980 -1996	National	No	Yes
AIM, 1995	US GAAP/ IAS/ IFRS/ National	No	Yes
Techmark, 1999	IFRS, 2005	Yes	Yes

Source: Posner (2005)

Since May 2005, the UK has seen the launch of the following AIM real time indices: FTSE AIM UK 50 - the largest 50 eligible UK companies by market capitalisation; FTSE AIM UK 100 - the largest 100 eligible companies by full market capitalisation and FTSE All-Share - all AIM quoted companies (originally called FTSE AIM Index). AIM has a higher spread between the bid-ask prices and many stocks do not trade because of the lack of liquidity, poor investment coverage and are often not suitable for many investors. In contrast, the main market has larger and liquid stock, usually targeted by large asset fund management.

<sup>22</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/publications/documents/a-guide-to-aim.pdf>, accessed 24 January 2014

AIM began operations in June 1995, with the listing of ten companies, having an aggregate market capitalisation of £82 million. The number of companies on the AIM has grown to over 1,100 companies with a market capitalisation of £78.3 billion by June 2014. Table 6.2 clearly shows growth both in terms of the number of companies and the money raised on AIM since 1995. AIM is attractive to both UK based and overseas companies. The number of international companies reached a high of 347 companies in 2007, but there has been a decline since then to 222 international companies by June 2014.

Since, the launch of AIM in 1995, by the LSE has developed into a significant global asset class within the UK financial sector, both in terms of the number and diversity of the companies admitted to the market. The majority of the companies are predominantly small, growing and UK originated companies. However, it has become popular with foreign companies (see Table 6.2). By June 2012, there were 1,096 companies quoted on the AIM from 38 sectors, and AIM companies have generated over £80.8 billion since the stock market started. The importance of AIM as part of the London Stock Market is that it has become a valuable pool of international capital, attracting a diverse range of companies from different business sectors. The AIM market, as a classic city institution with its principle-based regulation and easier access by companies, has been highly criticised, and described as a gambling unit by Roel Campos<sup>23</sup>, of the United States Securities and Exchange Commission (SEC)<sup>24</sup>. The SEC Commissioner's remark came as the number of new admissions on the AIM had outstripped the new listings in the United States exchanges and amongst concerns that the US capital market was losing its leading position for IPOs. AIM has been an attractive market, in particular for international companies who now have an alternative listing compared to a listing on the US stock exchange. Graffignini (2009, 262) provides examples of American companies such as Catalytic Solutions and Solar Integrated Technologies

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<sup>23</sup> <http://www.efinancialnews.com/story/2011-03-31/aim-chief-responds-to-report-on-lack-of-regulation-new-economic-foundation-ne>

<sup>24</sup> The Financial Times, 9 March 2007

listed on the AIM, that have benefited due to the reduction on compliance costs related to adoption of Sarbanes-Oxley Act 2002; companies can avoid filing quarterly and annual reports and instead submit reports twice a year, and the period to list successfully is substantially reduced. Graffignini further says that the regulation on the AIM is commonly characterised as light-touch regulation. The light-touch regulation means that companies coming onto the AIM are not scrutinised to the same extent as those listing on the main market (Mallin and Ow-Yong 2010, cited in; Cressy *et al.* 2012, 108) leading to a competitive advantage over the new listings for the AIM. LSE has differentiated the application of the UK Corporate Governance Code (previously Combined Code) such as AIM listed companies do not need to abide by it, whereas the companies on the main market have to 'comply or explain' basis. Therefore, the AIM companies are subject to lighter governance requirements (OECD, 2009).

**Table 6.2: AIM Statistics Since its Launch in 1995**

	No. of companies- Country of Incorporation			No. of admissions	Money raised £m (new and further)
	UK	International	Total	Total	Total
19/06/1995	10	0	10		
1995	118	3	121	123	96.5
1996	235	17	252	145	823.6
1997	286	22	308	107	691.7
1998	291	21	312	75	585.2
1999	325	22	347	102	933.9
2000	493	31	524	277	3,092.4
2001	587	42	629	177	1,128.4
2002	654	50	704	160	975.8
2003	694	60	754	162	2,095.2
2004	905	116	1021	355	4,656.1
2005	1,179	220	1,399	519	8,942.4
2006	1,330	304	1,634	462	15,678.1
2007	1,347	347	1,694	284	16,183.9
2008	1,233	317	1,550	114	4,322.3
2009	1,052	241	1,293	36	5,601.6
2010	967	228	1,195	102	6,957.6
2011	918	225	1,143	90	4,269.1
2012	870	226	1,096	71	3,168.8
2013	861	226	1087	99	3915.4
June 2014	882	222	1104	64	3706.5
<b>Total launch to date</b>				<b>3,524</b>	<b>87,771.4</b>

Source: London Stock Exchange

The above sections suggest that the higher number of listings on the AIM was due to the attractiveness of the flexible regulation on the AIM compared to the more rigid and rule based Sarbanes Oxley Act 2002 (SOX)<sup>25</sup>. However, prior to enactment of the SOX 2002, the AIM was well established. The QCA Guidelines to date recommend that the AIM companies should use the ‘comply and explain’ concept for adoption of the corporate governance practices. The action of the SOX was due to corporate mismanagement and accounting scandals from companies such as Enron and WorldCom, and the downfall of accounting firm Arthur Andersen. The

<sup>25</sup> London Stock Exchange, Aim: Growth Market of the World 15 (2008), [www.londonstockexchange.com/NR/rdonlyres/3B5EDCF9-1E01-4B7C-A31A-95B717067SB9/0/LSEAIMBROCHUREWEB.pdf](http://www.londonstockexchange.com/NR/rdonlyres/3B5EDCF9-1E01-4B7C-A31A-95B717067SB9/0/LSEAIMBROCHUREWEB.pdf) (last visited May 7, 2008). As of April 2008, there were 1,683 companies trading on AIM, 481 of those companies were international

preamble to SOX states that its purpose is to protect investors by improvements in the accuracy and reliability of corporate disclosures<sup>26</sup>. Roe (2006) states for a stock market exchange to succeed a country's legal provision for protection of the shareholders' interests and property rights is necessary. Peristiani (2007, 4) suggests several reasons for the growing concerns that the US capital markets are seeing a drop in the number of new international IPOs. First, the European and Asian exchanges are able to meet the capital needs of large companies locally and thus increase their national market share. Second, the non-US issuers are concerned about implementing the stringent SOX Section 404<sup>27</sup> and third, the higher cost of listing in the US<sup>28</sup>.

The laws and regulations imposed on the US financial market and its regulatory structure has decreased the US competitive position with respect to other countries and in particular the UK. Emphasis has been due to the stringent regulation of the Sarbanes-Oxley Act 2002 (SOX) raising the listing costs in the US. Doidge *et al.* (2009, 254) supports that SOX makes a US listing more difficult for companies because of the costs on both the companies and their managers, especially due to the compliance requirements of Section 404. To prevent the dominance of US stock market from receding, special research committees such as Committee on Capital Market Regulation propose several solutions. The committee proposes, for example, elimination or revising sections of the SOX, curbing securities litigation and reformation of the enforcement guidelines<sup>29</sup>. The evidence comes from three main areas of concern. First, the US declining share of global IPO volume; second, US equity market loss of distinction as the first choice for IPOs by foreign companies and third, decrease in cross listing ratios, which suggest that the share of foreign companies listed in the US has been stagnant since 2000.

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<sup>26</sup>See Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (2006). cited in (Hill 2009, 130).

<sup>27</sup>McKinsey & Company, Sustaining New York's and the U.S. Global Financial Services Leadership, January, (2007), pg 12

<sup>28</sup>Stavros Peristiani, Evaluating the Relative Strength of the U.S. Capital Markets, Current Issues in Economics and Finance, Federal Reserve Bank of New York, Volume 13. No. 6 July (2007) [http://www.newyorkfed.org/research/current\\_issues/2007.html](http://www.newyorkfed.org/research/current_issues/2007.html) accessed 20 March 2014

<sup>29</sup><http://www.sec.gov/comments/s7-02-10/s70210-128.pdf>, accessed 16 August 2014

However, in 2013 the New York Stock Exchange raised \$44.4 billion from 111 new IPOs, whereas the LSE raised \$18.7 billion from 33 listings. The LSE was followed by the Hong Kong Stock Exchange, which raised \$18.5 billion through 455 IPOs. NASDAQ ranked fourth and raised \$16.6 billion in new IPOs.<sup>30</sup>

AIM is an important part of the London Stock Exchange. The advantages are that they share the same trading systems (SETSmm, SEAQ and SEATS Plus) and the same website (Board *et al.* 2006, 199). One of the reasons for the popularity for the admission of the companies on the UK stock market is the self-regulatory nature of corporate governance in the UK economy (Dignam 2007). This is in direct contrast to the US stock market, which has much higher costs of listing, compulsory adoption of Sarbanes-Oxley Act 2002 irrespective of the size of the company. Moreover, the former Securities and Exchange Commission chairman, Arthur Levitt, advocates implementation of even stronger measures in the US<sup>31</sup>.

The rest of the chapter follows as: section 6.2 considers the AIM's competitors; section 6.3 examines the role of nominated advisers. Sections 6.4 and 6.5 consider the regulation for nominated advisers and regulation in UK. Sections 6.6 and 6.7 look at corporate governance and its application to the AIM companies. Section 6.8 considers the role of the Quoted Companies Alliance. Section 6.9 looks at some examples of previous studies on AIM and section 6.10 concludes.

### **AIM Characteristics**

Board *et al.* (2005)<sup>32</sup> provide AIM companies' characteristics from their report on the perception that the AIM market is riskier than the London's main market. Some of the characteristics are shown next. AIM companies are smaller than those listed on the LSE main market. The AIM companies are less diversified than

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<sup>30</sup> Anna Irrera, <http://www.efinancialnews.com/story/2014-01-13/londond-stock-exchange-second-biggest-for-ipos-in-2013?ea9c8a2de0ee111045601ab04d673622>, accessed 19 September 2014

<sup>31</sup> Neil Weinberg (2007) Levitt Loves Sarb-Ox Forbes.com, [http://www.forbes.com/2007/02/07/levitt-sec-sarbox-biz-cz\\_nw\\_0207levitt.html](http://www.forbes.com/2007/02/07/levitt-sec-sarbox-biz-cz_nw_0207levitt.html)

<sup>32</sup> Board A false perception. Relative riskiness accessed 4 October 2014

large companies on the main market. Companies listed on AIM are younger than those quoted on the LSE. Majority of the companies listed on AIM tend to be from industrial sector such as mining and oil and gas. It is generally agreed that companies on the AIM have lower liquidity than those on the main market, with less frequent trading and this may result in fewer but larger price movements. They have smaller free float than the companies do on the main market. Since the ratio of the tradable shares to total shares is much lower and thus any news in respect of an AIM company will have a higher price impact. Venture capitalistic tend to be more involved in AIM companies, and have a shorter investment policy, and when they exit huge price volatility may incur.

## 6.2: AIM's Competitors

Posner (2005, 2) states that between 1995 and 2005, 12 European countries created at least twenty 'new' stock markets specifically designed for entrepreneurial companies to enable them to access different sources of finance. It is interesting to note that most of these 'new' markets modelled on the US, the National Association of Securities Dealers Automated Quotations (NASDAQ). The rationale for a second tier market acts as a potential feeder to the country's main market. Examples of these include the Second Marché of the Paris Bourse, the Geregelter Markt of Deutsche<sup>33</sup> and the Mercato Ristretto of Borsa Italia<sup>34</sup> (Vismara *et al.* 2012). Another group was created for the high tech companies, and these formed the basis for the pan European network called 'Euro.NM' (NM stands for new stock markets). The members of Euro.NM included the Nouveau Marche (France), Neuer Markt (Germany), Nieuwe Markt (Holland) and Nuovo Mercato (Italy) and Euro.NM Brussels and smaller company market in Sweden, Denmark and Switzerland. Euro.NM had a short duration since it opened in 1997 and closed down its operations in December 2000, but its member exchanges carry on operating separately (Bottazzi and Da Rin 2002, 232).

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<sup>33</sup> <http://www.boerse-frankfurt.de/en/basics+overview/market+segments/regulated+market>

<sup>34</sup> <http://bankpedia.org/index.php/it/115-italian/m/21079-mercato-ristretto>

An observed success of AIM is evident because the LSE and Tokyo Stock Exchange (TSE) published a framework for a new Tokyo based market for smaller growth companies. This new market structure emulates the LSE's AIM market, which is underpinned by a regulatory framework, which is, accommodating to the needs of growth companies plus the unique role played by the Nominated Advisers (Nomads) in aiding issuers to meet their obligations as public companies. The operation of these markets focus is to address the external financial needs faced by growing companies and provide new opportunities for local and international professional investors.

Atsushi Saito, President and CEO of the TSE, said:

*'We are delighted to be able to publish the rulebook for our new joint venture market, as well as to announce its official name: TOKYO AIM. Our strong partnership with the London Stock Exchange has enabled us to make steady progress towards the launch of TOKYO AIM.'*<sup>35</sup>

Other major countries have emulated similar models, for example, in France, Italy, Japan, and Canada (Revest and Sapio 2013). However, AIM Tokyo and AIM Italia have been the only two using the AIM-Nomad model. There are several smaller stock exchanges similar to AIM, some have terminated and others renamed. Table 6.3 shows a list of the smaller exchanges. Further evidence of the success of AIM model as it has been imitated by Italy and Japan with the use of a Nomad as a key similarity between these exchanges (Mallin and Ow-Yong 2012, 108). The AIM, TSX Ventures in Tokyo and Korea's KOSDAQ of all the small exchanges have a separate exchange market<sup>36</sup>, while others are a separate board within the exchange and operate in parallel to the main board. AIM is the largest by market capitalisations and has the highest number of international companies. Most of these markets adopt a 'junior market' strategy in which the listed companies graduate to the main market.

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<sup>35</sup> <http://www.londonstockexchange.com/about-the-exchange/media-relations/press-releases/2009/tokyostockexchangeandlondonstockexchangepublishrulebookforpubliccommentnamenevgrowthmarkettokyoaim.htm>; downloaded 6 November 2011

<sup>36</sup> [http://siteresources.worldbank.org/INTEXPCOMNET/Resources/FIAS\\_Note\\_315.pdf](http://siteresources.worldbank.org/INTEXPCOMNET/Resources/FIAS_Note_315.pdf)

**Table 6.3: Worldwide Smaller Exchanges**

<b>Country</b>	<b>First</b>	<b>Name</b>	<b>Regulator/Advisor</b>
London	June 19, 1995	Alternative Investment Market(AIM)	NOMAD
Germany	June 21, 2005	Freiverkehr Markt	
Euronext	May 17, 2005	Alternext	Trust intermediary
Spain	April 10, 2000	Nuevo Mercado	
Italy	May 8, 2009	Mercato Alternativo dei Capitali July 18, 2007: Merger with LSE, formed AIM Italia	NOMAD
Ireland		Enterprise Securities Market	ESM Adviser
Canada		TSX Venture Exchange	
Hong Kong		Growth Enterprise	Sponsors and Compliance Advisers
Korea	January 1997	KOSDAQ	Korean Stock Dealers Association - based on NASDAQ
Singapore		SESDAQ/renamed Catalyst	Sponsor
Japan	April 2009	Mothers, Tokyo AIM <sup>37</sup>	NOMAD
United States		OTCQX	Designated Advisory for Disclosure (DAD)
China		Shenzhen ChiNext	

The ICAEW report shows support for the lighter-touch disclosure and financial reporting requirements as compared to the full Prospectus Directives Regulations<sup>38</sup>. Roel Campos<sup>39</sup> has highly criticised AIM's so-called lighter touch regulation and compared it to a casino. He further felt that the lax regulation of AIM

<sup>37</sup> LSE withdrew from the joint venture, and Tokyo Stock Exchange took over 100% of Tokyo-AIM. <http://www.eurotechnology.com/2014/02/24/tokyo-aim-to-tokyo-pro-market/> accessed 19 August 2014.

<sup>38</sup> London Stock Exchange AIM Notice 24 AIM Rules for Companies, AIM Rules for Nominated Advisers and AIM Disciplinary Procedures and Appeals Handbook ICAEW Rep 66/06.

<sup>39</sup> Roel Clark Campos served as Securities and Exchange Commissioner from 2002 to 2007. see The Times March 9, 2007.

would indirectly affect the credibility of the LSE<sup>40</sup>. However, his comments are in sharp contrast to those made by Bob Greifeld, Chief Executive of NASDAQ, who felt that the US should relax the stricter Sarbanes-Oxley regulation as non-US companies were avoiding to list on the US stock exchanges (Piotroski and Srinivasan 2008, 385). The decline in the US market hegemony, for new international IPOs, has seen the development of OTCQX, a listing platform, which resembles the more lightly, regulated AIM.

### 6.3: Regulation: EU and UK

The attractiveness of the companies listing on the AIM is due to the less demanding requirements than the main market, for example, there are no thresholds on company size, trading records or proportion of shares in the public hands. These differences in the admission criteria are summarised in Table 6.4.

**Table 6.4: Differences in the admission requirement**

<b>Main market</b>	<b>AIM</b>
Minimum market capitalisation of £700,000 for equity	None
Production of a prospectus for approval by the UKLA	None
Minimum 25% shares to the public	None
3 year trading record required & clean audit report	No trading record required
Prior shareholder approval required for substantial approval of acquisitions and disposals	Not required
Sponsors needed for certain transactions	Nominated adviser required at all times
Pre-vetting of prospectus by the UKLA	Admission documents not pre-vetted by the Exchange or by the UKLA in most circumstances. The UKLA will only vet an AIM admission document where it is also a Prospectus under the Prospectus Directive

Source: London Stock Exchange, A guide to AIM (2010)

Currently, in the UK, in the absence of an application for admission to official listing and/or trading, a prospectus does not need approval by the competent

<sup>40</sup>Matthew Lynn, Investment Week 16 July 2007.

authority. In order to prevent costs increases for issuers intending to float on AIM, the LSE announced on 18 May 2004, that, with effect from 12 October 2004, AIM would cease to be a regulated market, thus bringing it outside the scope of the EU Directive<sup>41</sup>. The main attraction of AIM has been its flexibility resulting from its lighter regulatory regime. Therefore, the advent of the EU Prospectus Directive in July 2005 was seen to have a negative impact on the AIM because of the additional level of regulatory requirements (Brooks 2006, 8).

A '*regulated market*' includes the main listing on the LSE, but excludes the AIM. Since AIM has changed its status to '*exchange regulated*', since October 2004, which would protect the AIM companies from having to adhere to several European directives on financial regulation. The main motivation is to reduce compliance overheads that would result from both the European Prospectus Directive and the Market Abuse Directive. With the implementation of the EC's financial services action plan, AIM's object to seeking a change in status will protect the structure that allows flexibility, which has been the foundation of the market's success. To avoid the implications of the Prospective Directive, the LSE proactively changed the AIM to an exchange-regulated market rather than a pure regulated one. The advantage of this is that although the public offering on AIM requires a prospectus, but making an application for the admission does not. The exemptions from the requirement to publish a prospectus in the UK in relation to the AIM initial public offerings, fund raisings and takeovers include the total consideration payable for securities is less than £1.71 million (Brooks, 2006) and offers made solely to qualified investors. As of February 2007, the LSE introduced new rules, including AIM Rule 26<sup>42</sup>, for companies whose shares trade on the AIM following a consultation period at the end of 2006. AIM companies are now required to have in place corporate websites detailing financial and governance information in the interests of disclosure and transparency.

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<sup>41</sup> LSE Annual Report 2005, p10

<sup>42</sup> AIM Rules for companies, July 2005, August 2006, February 2010, <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/rules/aim-rules-for-companies.pdf>

AIM has rivalled its competitors<sup>43</sup> since the listing of new companies on AIM is far higher than in other stock exchanges. One of the key successes of AIM's performance is the internationalisation of the companies listing on AIM. This is evident from the market capitalisation of the 452 international companies, which is much higher at £31.8 billion compared to the market capitalisation of £29.4 billion from the 644 UK companies (see Table 6.5). Doidge *et al.* (2009, 258) find that the Australian, Canadian, Irish and US companies dominate the new listings on the AIM and represent almost 61% of the total foreign listings for the period 1995 to 2005. However, at December 2012 this figure for the same countries as Doidge *et al.* is reduced to 20%. Australia, China and the US dominate the AIM sample of foreign listings.

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<sup>43</sup> LSE Annual Report 2005, p7

**Table 6.5: Listing of the foreign countries companies on AIM**

Country of Operation	Number of companies as per country of operation	Total market capitalisation as at Dec 2012 £million
Africa	61	4,428
Australia	28	648
Canada	16	1,614
Central & Eastern Europe	18	1,220
Channel Islands	11	979
China	46	2,826
India & Bangladesh	25	3,873
Isle Of Man	8	229
Israel	8	112
Japan	1	105
Latin America	23	1,664
Middle East	10	1,802
Other Offshore	10	270
Russia & CIS <sup>44</sup>	39	1,968
South East Asia	39	3,777
US	47	2,998
Western Europe	62	3,307
Total: International companies	*452	31,819
Total: UK companies	644	29,352
<b>Total</b>	<b>1,096</b>	<b>61,171</b>

\*Total figures are different from Table 6.2, because Table 6.2 uses country of incorporation whereas Table 6.5 uses the country of operation.

Source: AIM statistics London Stock Exchange Dec 2012: AIM Rules for Nominated Advisers

## 6.4: Nominated Advisers

A central and unique structural feature of AIM's regulatory system is the important role played by the Nominated Advisers (Nomads) (Mallin and Ow-Yong 1998, 232). Nomads are private regulators that oversee individual AIM companies and they make an opinion as to whether a particular company can list on to the AIM. This system of private regulation reduces regulatory barriers and attracted many companies (Stringham and Chen 2012). The growth in the AIM companies has resulted in a change, in the regulatory regime and reorganisation of the AIM Rules.

<sup>44</sup> Commonwealth of Independent States (CIS) was created in December 1991. At present, the CIS unites Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine.

There are now two rulebooks: AIM Rules for Nominated Advisers and AIM Rules for Companies. The design of the AIM regulatory structure is to balance the need to protect companies to control costs associated with admission to a public market<sup>45</sup>.

The AIM Rules for Nominated Advisers (2014<sup>46</sup>) provides four criteria for an entity to gain approval to act as a Nomad by the LSE. These criteria state that the entity must be a firm or company, have practiced corporate finance for at least the last two years, have acted on at least three relevant transactions during the two year period and employ at least four Qualified Executives. Mendoza (2008) suggests that Nomads play multiple roles as gatekeepers, advisers and regulators of the AIM. The more stringent listing, regulatory and disclosure requirements for the main market are not required for companies listing on the AIM. The LSE began regulatory reviews of Nomad, which started in 2007 after the publication of the AIM Rules for Nominated Advisers<sup>47</sup>. The objective of the reviews is to assess the compliance of Nomads with the AIM Rules for Nominated Advisers. These rules cover both the obligations at admissions of an AIM company and its continuous obligation. Since April 2010, the LSE have introduced a broad risk based reviews for the Nomad.<sup>48</sup>

The LSE delegates important regulatory responsibilities to Nomads, for example, assessing the appropriateness of companies prior to admission. Nomads provide advice and guidance to AIM companies post admission. The Nomads' responsibility continues to ensure ongoing compliance with the AIM Rules and the corporate governance for the company for the duration of its listing on the AIM. Hence, the Nomads have unrestricted authority to decide whether the company no

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<sup>45</sup>LSE available at <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notices/ad8-disciplinary-notice.pdf> ; Pinsent Masons, Nomad Censure increases regulatory burden, June 2009, available at <http://www.pinsentmasons.com/PDF/AIMMarketUpdate.pdf>. Pinsent Masons is a legal adviser to AIM companies and Nomads.

<sup>46</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notices/aimrulesnomadsmay14.pdf>

<sup>47</sup> AIM Rules for Nominated Advisers, February 2007  
<http://www.londonstockexchange.com/companies-and-advisers/aim/publications/aim-rules-for-nominated-advisers.pdf>

<sup>48</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/inside-aim-newsletter/inside-aim-issue2.pdf>

longer fits the AIM listing (Mendoza 2008, 317). However, if a company quoted on the AIM dismisses its Nomad, or if a Nomad decides to sever its relationship with an AIM company, the company has 30 days in which to appoint another Nomad otherwise the AIM company's shares are suspended and eventually removed from the AIM. Nomads are LSE (previously FSA) authorised and regulated, and must have adequate systems and controls in place to prevent bribery and comply with the UK Bribery Act 2010.

Appendix 1 shows a list of the names of the Nomads on LSE at April 2013. Nomads are mainly from the following sectors: accountancy firms, corporate finance, investment banks, and lawyers. Currently active Nomads, include highly regarded firms like Grant Thornton UK, HSBC Bank, J.P. Morgan and Merrill Lynch. Currently, over 50 Nomads advise companies seeking to list on the AIM. The primary function of the Nomad is to decide whether a company is suitable for AIM. Once listed, the company must have an appointed Nomad at all times, as without one they would be unregulated. A Nomad is required to be a member of the LSE. Nomads are responsible for advising issuers of their obligations to the LSE under the AIM Rules for Companies. Due to the lighter regulation of the AIM, if the Nomads do not carry out their work efficiently, may enable some companies that lack sound corporate governance structures to enter AIM. LSE takes its supervision of AIM seriously, and levies fines on both the Nomad and the issuer for breach of the rules. The first Nomad to be censured publicly was Durlacher. Durlacher did not make public material information about profit warnings and whilst its client, an AIM listed financial services raised money in placing of convertible loan stock. Campbell and Tabner (2014) cite the following censures for breaches of the AIM Rules for Nominated Advisers. The censure disclosed in October 2007 when the Nomad Nabaro Wells was fined £250,000. Astaire Securities PLC, formerly Blue Oar Securities PLC is an example of the failure of compliance with the AIM rules. The AIM Disciplinary Committee found the company in Breach of Rule 39 of the AIM Rules for Companies and Rules 16, 18 and 19 of the AIM Rules for Nominated

Advisers<sup>49</sup> and fined £225,000<sup>50</sup>. The next case was disclosed in 2011, when the disciplinary committee of AIM publicly censured the Nomad Seymour Pierce and imposed a fine of £400,000 for breaches of four Nomad rules in relation to two client firms in 2011<sup>51</sup>.

Many Nomads have largely relied upon voluntary disclosure by, and discussion with, the company's directors rather than examining the entire relevant underlying document themselves. The disadvantage of this is that the Nomads may fail to assess adequately whether the company is appropriate for admission to AIM; carry out due diligence and advise the company properly regarding disclosures at admission and post admission to ensure compliance by the company with the AIM rules.

The AIM Disciplinary and Procedures Handbook forms part of the AIM Rules and sets out the procedures to be followed when the LSE considers that a Nomad or an AIM company has breached its responsibilities under the AIM Rules. If the LSE wants to commence disciplinary action against an AIM company or a Nomad, LSE shall refer the matter to either the AIM Disciplinary Committee or the AIM Executive Panel. Upon conclusion of the investigation, the LSE will decide what action is necessary in each case. As a minimal disciplinary process, the LSE will instruct the party to take remedial action, or alternatively may issue a warning notice.

The Stock Exchange AIM Disciplinary Notice publishes details of their disciplinary action on an anonymous basis, as deterrents and emphasizing to AIM companies and their Nomads the expected standards of conduct on the AIM.

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<sup>49</sup> See Public Censure and Fine – Astaire Securities Plc, February 2007 at <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notices/ad8-disciplinary-notice.pdf>, accessed 16 August 2014.

<sup>50</sup> London Stock Exchange, Stock Exchange AIM Disciplinary Notice, 22 June 2009

<sup>51</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notices/aim-notice-ad11.pdf>, accessed 16 August 2014.

Disciplinary or corrective action is in the following circumstances: first, the use of over optimistic language when updating the market on its future prospects and giving no explanation as to their assumptions of their expectations and associated risks. Second, prior to verification of the accuracy of results, company prematurely announces price sensitive information on positive results. Third, postponement of disclosure of negative trading update, in the belief they may be able to announce positive news within a short term. Fourth, failure to update the market on the progress of a pre-announced refinancing deal once the deadline had passed. Fifth, material facts omitted from a company's admission document.

## **6.5: AIM and Corporate Governance**

Companies listed on the UK's main market are required, as part of the Listing Agreement, to adopt the recommendations of the UK Corporate Governance Code 2012 (previously discussed in Chapter 4). Companies quoted on the AIM are not technically 'listed', and hence the terms of the Listing Agreement are not a binding requirement for these companies. However, the various corporate governance reports recommend that 'smaller companies outside the FTSE350' should follow the same corporate governance standards as those applying to larger listed companies, and the UK Corporate Governance Code supports this view. Although this recommendation applies to smaller listed companies, the spirit of the recommendation would apply to AIM companies<sup>52</sup>, as well, shown by the UK Corporate Governance Code (2010, 5)

*'Smaller listed companies, in particular those new to the listing, may judge that some of the provisions are disproportionate or less relevant in their case. Some of the provisions do not apply to companies below the FTSE350. Such companies may nonetheless consider that it would be appropriate to adopt the approach in the Code and they are encouraged to do so'.*

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<sup>52</sup>See A Guide to AIM 2010, <http://www.londonstockexchange.com/companies-and-advisers/aim/publications/documents/a-guide-to-aim.pdf>, pg 20

## 6.6: Application of Principles

From the beginning of the development of the corporate governance reform in the UK, a voluntary approach of ‘comply or explain’ has been a key focus. A ‘comply or explain’ approach facilitates companies to choose what balance is most fitting for them and to tailor their response accordingly. Applying this to the general issue of compliance with the UK Corporate Governance Code (previously Combined Code), we would expect some AIM companies to explain why they do not comply (or comply fully) with the Code. Most of the companies seek to comply with the provisions and principles of good corporate governance and code of best practice (the ‘Combined Code’) as far as it is practicable for a group of its size and structure. The following section follows a few examples of corporate governance compliance statement:

*‘The rules relating to securities traded on the London Stock Exchange’s AIM market (AIM) do not require AIM companies to report in accordance with the Combined Code. However, the Board believes in the principles of good corporate governance and is committed to applying the highest principles commensurate with its size’ (Character Group Plc Annual Report 2012, 11).*

*‘The Company is listed on the Alternative Investment Market and is not required to comply with the provisions set out in Section 1 of the 2008 FRC Combined Code. However, the Directors support the principles contained in these requirements and apply these where they consider they are appropriate to Mulberry Group plc’ (Mulberry Group plc, Annual Report 2011, 7).*

*‘The Board of the Company is committed to achieving the highest standard of Corporate Governance. Although not formally required to do so, the directors have sought to embrace the principal governance rules applying to UK companies fully listed on the London Stock Exchange in formulating and applying the Company’s corporate governance policies. The principal governance rules are*

*contained in the Combined Code on Corporate Governance adopted by the Financial Reporting Council in June 2008 ('Combined Code'). The Company's policies are monitored to ensure that they are appropriate to the Company's circumstances and comply as far as possible with the provisions of the Combined Code given the size of the Company' (ASOS Annual Report, March 2011, 40).*

The significant growth in the number of companies admitted to AIM, and its attractiveness for larger companies, suggests that institutional investors are likely to be showing greater interest in the AIM companies. The National Association of Pension Funds (NAPF) has published, in March 2007, a Corporate Governance Policy and Voting Guidelines for AIM listed companies. The NAPF Guidelines are consistent with the guidelines of the QCA. Despite the exemption from the adoption of Combined Code recommendations, the NAPF guidelines suggest that the boards of AIM companies should be familiar with the main principles of the Combined Code and should seek to apply them as appropriately to their circumstances. The policy document states that the companies at the top end of the AIM market, by market capitalisation, should comply with the provisions of the Combined Code or explain non-compliance. The importance provided to corporate governance disclosures by institutional shareholder and regulation in Table 6.6 shown below. The differences are minimal between the three different institutional requirements, which are NAPF, QCA and the Combined Code requirements.

**Table 6.6: Comparative Disclosure Requirements**

<b>Disclosure</b>	<b>National Association of Pension Funds March 2007<sup>53</sup></b>	<b>UK Corporate Governance Code (Combined Code)</b>	<b>Quoted Companies Alliance Guidelines</b>
<b>Corporate governance policies - Statement on Corporate Governance required</b>	Yes	Yes	Yes
<b>Biographical details of directors and board</b>	Required	Required	Required – in the annual report or the website
<b>Separation of the roles of Chairman and CEO</b>	Support for the separation of the roles – requires disclosure in the annual reports if combined	Yes	Yes
<b>CEO becoming Chairman</b>	As per Combined Code principle	CEO should not go on to be a Chairman of the same company	Not addressed
<b>Senior Independent Director</b>	As per Combined Code principle	A senior independent NED, other than the board Chairman	Not addressed
<b>Balance of the Board</b>	Smaller company should have at least two independent NEDs	Smaller company should have at least two independent NEDs	Two independent NEDs
<b>Board committees</b>	As per Combined Code principle	Audit, Remuneration and Nomination	Remuneration Committee Guide for Smaller Quoted Companies (Feb 2012) Audit Committee Guide for Smaller Quoted Companies (Feb 2009)
<b>Non Compliance</b>	Detailed Explanation	Detailed Explanation	
<b>Remuneration arrangements</b>	Companies to put their remuneration report to a vote at the AGM	Companies to put their remuneration report to a vote at the AGM	Companies to put their remuneration report to a vote at the AGM

Source: London Stock Exchange; Mallin and Ow-Yong (2008; 2012), National Association of Pension Funds March 2007

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[http://www.napf.co.uk/PolicyandResearch/DocumentLibrary/~/\\_media/Policy/Documents/0023\\_Corporate\\_governance%20policy\\_and\\_voting\\_guidelines\\_for\\_Aim\\_companies\\_Mar\\_2007\\_0307.ashx](http://www.napf.co.uk/PolicyandResearch/DocumentLibrary/~/_media/Policy/Documents/0023_Corporate_governance%20policy_and_voting_guidelines_for_Aim_companies_Mar_2007_0307.ashx); accessed 28 august 2013

There is consensus that AIM companies should not have a lesser standard of disclosure, for example, the directors' compensation is one of the major areas of conflict and hence appropriate disclosure is fundamental to the relationship between shareholders and management (UKSA, 2002)<sup>54</sup>. Literature on country studies show that individual companies can select governance arrangements in excess of what is required by law and regulation, and these has a deep impact on valuation. Black (2001), for example, finds that Russian companies with good corporate governance ratings are a hundred times more valuable compared to their peers with poor corporate governance ratings. Using a governance index for US companies, Gompers *et al.* (2003) find that better governed companies perform better on the stock market. Similarly, Durnev and Kim (2005) shows a positive relationship between company governance and valuation is systematic across a large set of companies and countries.

### **6.7: The Role of the Quoted Companies Alliance**

A group of smaller quoted company advisers formed the City Group for Smaller Quoted Companies (CISCO) to lobby the London Stock Exchange to introduce a junior market that could be used for entrepreneurial companies to raise equity funding, without having to endure the costly and time-consuming requirements of a listing on the main market. CISCO, the association representing smaller quoted companies (outside the FTSE 350) in the UK has changed its name to the Quoted Companies Alliance (QCA) (Corporate Governance Update 2001).

The QCA is a not for profit organisation that represents the interests of the smaller quoted companies on the main market (outside the FTSE 350), AIM and the PLUS markets. The characteristics of these companies are that they have a lower level of management and financial resources, narrow shareholder base and low investor profile. The objectives of the QCA are to benefit the small and mid cap sector in reducing the burden of regulation, improving investor liquidity and facilitate knowledge sharing between its members. The QCA has over 200 members:

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<sup>54</sup>The United Kingdom Shareholders Association (UKSA), Response to 'Company Law- Directors Remuneration – A Consultative Document', 2002:3

60% of these are smaller quoted companies and 40% from professional advisory companies.

The QCA is governed by an elected executive committee and undertakes its work through a number of focused committees and working groups of members. Members of the QCA will have the advantages of obtaining information on regulation changes, networking events, technical guidance and promotion opportunities. The areas that have been concentrated on are taxation; legislation; corporate governance; share schemes for employees; trading, settlement and custody of shares; regulation of stock markets; political liaison; accounting standards and company law reform.

The QCA supports the principles of corporate governance contained in the UK corporate governance code (previously the Combined Code) and requires that all quoted companies, in so far as is practical for their size, should adopt the principles. The QCA advises smaller companies to comply with the Combined Code and where they are unable to comply fully, then the company should explain giving details why they are unable to comply (Mallin and Ow-Yong 2008). The QCA corporate governance guidelines for AIM companies were initially published in 2005 (Mallin and Ow-Yong 2008, 8). The QCA guidelines are minimal in comparison to the Combined Code, which is applicable to companies listed on the main market.

In May 2013, the QCA released Corporate Governance Guidelines for Smaller Quoted Companies (the 'QCA Code')<sup>55</sup>. The QCA Code now replaces the previous Corporate Governance Guidelines for AIM companies published in 2005 and 2010. The introduction of this material reflects the continued reverberation of the aftershocks of the financial crisis of 2008 and 2009. The QCA Code derives its guidelines from the UK Corporate Governance Code, and both have similarities, but the former is less prescriptive. For example, the QCA code specifies inclusion of corporate governance statement in the annual reports; board committees such as

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<sup>55</sup> <http://www.theqca.com/shop/guides/86557/corporate-governance-code-for-small-and-midsize-quoted-companies-2013-downloadable-pdf.html>

audit, compensation and nomination; identifying the roles and responsibilities of the directors; separate roles of the chairman and the chief executive officer and independent directors with a minimum of two independent directors. To date the UK Corporate Governance Code and the QCA code adopt the ‘comply or explain’ concept. The larger companies on the AIM generally comply with the QCA guidelines, and it is anticipated that even the smaller companies will follow with good governance principles. The QCA Code advises companies to make public an annual corporate governance statement in their annual report and accounts or on their website. The QCA provides 12 Guidelines, together with examples of governance structures and minimum disclosures. Table 6.7 summarises the QCA guidelines.

**Table 6.7: Quoted Companies Alliance Guidelines**

<b>QCA Guidelines</b>	<b>Examples of Governance Structure</b>	<b>Comment</b>
Structure and Process	Corporate governance framework	Chairman to report on the application of the QCA guidelines; Number of board meetings and of the committees and directors' attendance
Responsibility and accountability	Senior management	Role and responsibility of board, Chief executive and Chairman; where the roles of chairman and the chief executive are not separate; role of senior independent director
Board balance and size	At least two independent non-executive directors	Identity of all directors; terms and conditions of appoint and specifically for independent directors
Board skills and capabilities	Executive and non-executive directors	Effective audit, compensation and nomination committees
Performance and development		Regular reviews of the board's performance
Information and support		Board to be in receipt of up to date and accurate information
Cost effective and value added	Key performance indicators; non-executive director meetings with shareholders	Summary of risk management and internal control system; compensation policies and corporate social responsibilities' activities
Vision and strategy	Executive management	Communicated to shareholders and externally
Risk management and internal control	Annual review of effectiveness of internal control system	Responsibility of the board and communicated to shareholders
Communication of shareholders' needs and objectives	Meetings with the shareholders	Focused on votes at general meeting and proxy voting
Investor relations and communication	Investor relationship	Communication channel needs to be put between the board and the shareholders, for example, Annual reports
Stakeholder and social responsibilities	A proactive CSR policy	Implement a corporate social responsibility policy

Source: QCA Corporate Governance Guidelines for Smaller Quoted Companies, September 2010, Sec 3, pg 8-10

The LSE regards the UK Corporate Governance Code as the benchmark for all public companies, but it also supports the QCA guidelines for AIM (LSE September 2012, 54). Walmsley (2012, 5) in the forward note to publication on 'Corporate Governance for main market and AIM Companies by LSE stated the following supporting the above:

*‘Although companies on the London Stock Exchange’s long-established growth market, AIM, are not mandated under the AIM Rules to adhere to the provisions of the Code, they are encouraged to develop strong governance procedures and are advised to aspire to achieve the key elements set out in the Code as they grow. As a minimum, all AIM companies are encouraged to adhere to the Quoted Companies Alliance (QCA) Guidelines, which are based on the Code but specifically tailored to the needs of growth companies and their investors’.*

The obligation to ‘comply or explain’ under Disclosure and Transparency Rules (DTR) 7.2, LR 9.8.6R (5) and (6) and LR 9.8.7 do not apply to AIM as it is not a regulated market, Instead, the AIM regulatory framework relies on the ‘Nomad system’ to assist companies with the application of corporate governance guidance

*‘The AIM Rules for Companies do not require adherence to a particular set of corporate governance rules. The London Stock Exchange believes that a blanket requirement to ‘comply or explain’ by reference to a particular code would not be appropriate for the predominantly smaller, growth-stage companies that make up AIM’s constituent members. The London Stock Exchange’s ‘Inside AIM’ newsletter (issue 2, July 2010) stated: ‘Such a step may simply be seen as ‘more regulation’ rather than as a beneficial set of practices to improve the running of a company and the interaction between board and shareholders.’ For many AIM companies, according to :‘A Guide to AIM’, the costs of full compliance with the Code would outweigh the benefits to the average shareholder’ (see Cronin and Murphy 2012, 21).<sup>56</sup>*

The AIM companies compliance is mixed with some having full compliance with the UK Corporate Governance Code, and others adopting the QCA guidelines as a minimum. The three primary sources of corporate governance guidelines and

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<sup>56</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/publications/documents/corpgov.pdf>, accessed 24 January 2014.

rules, applicable to AIM companies include the AIM Rules<sup>57</sup>, the QCA guidelines and the Corporate Governance and Voting Guidelines for AIM companies, published by the National Association of Pension Funds (NAPF). Under the AIM Rules, companies on the AIM have no mandatory obligation to adhere to the provisions of the UK Corporate Governance Code; nevertheless, they are encouraged to develop strong governance structures and advised to adopt the key elements set out in the UK Corporate Governance Code as they grow. However, the QCA guidelines on corporate governance are the minimum requirement for all AIM companies to adopt. The QCA uses the UK Corporate Governance Code as a basis of their guidelines but these are less prescriptive. The QCA strongly supports the comply or explain approach, and this differentiated approach for smaller quoted companies, such as on the AIM would benefit since these companies are at different stages of development. Thus, the smaller quoted companies can tailor the recommendations to their advantage at the same time allowing companies to adopt principles of corporate governance. In the absence of mandatory rules, the key consideration is that the AIM companies should follow as a minimum the ‘Corporate Governance Guidelines for the Smaller Quoted Companies’ published by the QCA. In addition, the role of the Nomads is to encourage compliance.

Germany’s Deutsches Atkieninstitut, France’s MiddleNext and the UK’s QCA<sup>58</sup> have produced a principle-based common set of corporate governance guidelines known as the European Corporate Governance. This association emphasises the need for appropriate corporate governance among the small and medium sized quoted companies in Europe<sup>59</sup>. A common set of guidelines overlap considerably with the QCA guidelines, and the document invites companies ‘to use

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<sup>57</sup> The AIM Rules for Companies have been updated by the LSE with effect from 14 May 2014, except for the the amended Rule 26 on company information to be adopted by companies from 11 august 2014. Available at C:\Users\123\Downloads\Need to Know - AIM Rules.pdf, downloaded 16 September 2014; AIM Rules for Companies – May 2014 <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notices/aimrulescompaniesmay2014.pdf>

<sup>58</sup> [http://ec.europa.eu/internal\\_market/consultations/2011/corporate-governance-framework/registered-organisations/qca\\_en.pdf](http://ec.europa.eu/internal_market/consultations/2011/corporate-governance-framework/registered-organisations/qca_en.pdf), pg. 2, accessed 20 March 2014

<sup>59</sup> [http://www.theqca.com/article\\_assets/articledir\\_88/44421/EuropeanCorpGovGuidelines\\_May2011\\_Final.pdf](http://www.theqca.com/article_assets/articledir_88/44421/EuropeanCorpGovGuidelines_May2011_Final.pdf)

*these guidelines as they apply their own national code~'*, (which, for AIM companies, will normally be the QCA guidelines). In short, this complements the need to enhance monitoring towards increasing transparency, mitigating systemic risk and protecting the shareholders against managerial behaviour.

## **6.8: Literature Review**

Until recently the academic literature on the AIM was very sparse, as most of the work in the UK has focused on the larger companies listed on the main market. The most work on AIM that offer insights into AIM is from Mallin and Ow-Yong who have published several papers specifically on AIM (for example, Mallin and Ow-Yong 1998; 2008; 2010; 2012). While studies on the AIM companies differ considerably, they can be differentiated into four areas: cross-country and switching, performance, governance and others.

### **Cross-Country and Switching**

In the cross-country and switching group, for the AIM companies are expected to switch to the main market, if the company is successful, or some companies listed on the main market move to the AIM.

Board *et al.* (2006) in a study commissioned by the Task Force to Modernize Securities Legislation in Canada evaluated stock trading activity in the AIM and Toronto Stock Exchange (TSX) or Toronto Stock Exchange Venture Exchange (TSXV) for cross-listed Canadian shares. They also analyse the switch of UK companies from the AIM to the main market or vice versa and at stocks that have switched from the Canadian Stock Exchange. The analysis of the switching of companies from the LSE' main market to AIM showed no significant improvement in performance following the switch, and for those AIM companies switching to the main market displayed marginally poor performance following the switch. The study showed that there was no reduction in the trading activity on the TSX (or TSXV) after the companies listed on the AIM. In fact, listing on the AIM seemed to have motivated awareness in the Canadian market and on TSX (or TSXV) trading volume increased after cross listing. Doidge *et al.* (2009) find that despite the low number of listings on AIM, it has grown considerably since 2001. However, the characteristics

of the companies that list on AIM are small, and unlikely to cross list on the US exchanges. Doidge et al. examine whether the small size of the typical firm listed on AIM can list on NASDAQ. They find that 21 out of 80 non-US firms and only one of eight US firms meet the criteria of NASDAQ's listing rules. They conclude that AIM does not compete with NASDAQ. They find evidence supporting the non-competition between AIM and NASDAQ since only three companies joined AIM of the 95 US foreign delisting. In contrast, five out of the 105 LSE main market delisting joined AIM (p 263). In addition, they find that the companies that list on the AIM have a much higher Tobin's Q in the listing year compared to the companies listing on the main market.

Vismara *et al.* (2012) differentiate the evolution of the second-tier market in Continental Europe into three models: sequential, sectorial and demand led. In the sequential model, small successful companies move to the main market. The sectorial model applies to New Markets created in 1996-1999, with admission allowed to companies in high tech sectors. In the UK, there was no development of an independent new market, but instead a new market segment (techmark) which includes the high tech industries companies listed on the LSE. The third group is demand side model, typically associated with the LSE AIM. Since the launch of AIM in 1995 to 2009, 90 companies transferred from AIM to the LSE main market compared to 282 firms from the main market to AIM. Hence, a higher number of companies switch to AIM, when both the markets are in the same jurisdiction. Vismara *et al.* (2012, 377) using the official document when companies transfer between markets suggest that the reasons for transferring, for example, are lower costs, mergers and acquisitions, growth, shareholders' interest, flexibility, less regulation, fiscal benefits. Jenkinson and Ramadorai (2010) use press releases to analyse the companies transferring from AIM to the main market and vice versa. A common reason for the transfer to the AIM was the burden imposed by the obligations of the listing rules imposed by the LSE. Their study shows that companies transferring from the AIM to the main market have a positive announcement effect on the company's stock price, compared to the companies switching from the main market to the AIM where they have a negative announcement effects on the company's stock price. Despite the initial negative

effect for those companies that switched to AIM, over time the trading on the AIM for these companies is associated with positive average returns. The movement from the main market to AIM announcement results in an immediate negative return of 4% (p, 26); whereas they report a positive 6% return on the announcement of companies moving from AIM to the main market. This raises questions that the two-tier governance regimes in UK may be allowing companies from the main market to AIM, where the companies can avoid stringent governance standards.

Mizuno and Tabner (2008) compare the AIM with junior stock exchanges in East Asia, Tokyo Stock Exchange (TSE) Mothers market, Hong Kong Stock Exchange Growth Enterprise Market and the Singapore Exchange Catalist markets. Since, then TSE has set up a new market similar to the AIM model, Tokyo AIM in 2009.

Nielsson (2013) find that companies that list on AIM show similar characteristics as other companies that list in the US or in Continental Europe. In addition, the market valuation of the companies and the proportion of company failures are comparatively similar to that of other exchanges. Neilsson (2013) uses monthly AIM reports and suggests four reasons for companies that delist from AIM: transfer to the LSE main market, mergers and acquisitions, voluntary delist and involuntary reasons. The reasons for involuntary delisting are that a company may not be able to raise capital, failure to keep a Nomad at all times and fail to comply with the AIM rules.

## **Performance**

The second group identified in AIM research falls under the category of performance. The first of this is Colombelli (2010) who examines the effects of entrepreneurial orientation on company market performance for IPO sample of companies listed on the AIM in the period 1995 to 2006. The Colombelli study shows a positive impact of risk taking, innovation and proactivity on investors'

valuation. He concludes that second tier markets, such as AIM, are core for ensuring the financial needs of smaller companies are met.

Gerakos *et al.* (2013) provide evidence on the post-listing performance for AIM companies. They benchmark the AIM companies to companies listing on the “Pink Sheets” market in the US. The characteristics of the Pink Sheets’ companies are that they are not required to be SEC registered, limited in both permitted capital raising and share ownership. They find AIM companies perform poorer than Pink Sheets companies, which again suggest that the AIM registration process provides limited supervision. In comparison of their results on venture capital and private equity, they find that AIM companies significantly show poor performance. On their analysis of changes in AIM regulation, they conclude that the cash shells performance improved following the stricter regulation in 2005 and that the overall performance of AIM IPOs improved following the tighter regulation of Nomads in 2007.

Revest and Sapio (2013) empirical results suggest that companies listing on AIM tend to have higher than average growth in operating revenues and total assets, and in addition the AIM companies grow faster than comparable private companies in terms of employees. However, the growth in employees is not matched by a comparable growth in added value, thereby concluding that AIM companies tend to underperform in productivity. They further consider that Nomads build on indicators of success in promoting companies. However, once the companies are on AIM, their focus shifts from real performance to short-term financial results, which may be detrimental to the shareholders wealth in the long term. The above fits well due to the financial manipulation on AIM with high incidents of reverse takeovers, cash shell operations, and reduced regulations. However, these financial manoeuvrings will not be conducive to developing a sustainable market for the small or medium enterprises. Instead, one interpretation for the increasing growth in AIM is due to excessive financialisation and therefore, it is not surprising to see the high number of reverse takeovers. Epstein (2005) cited in Dore (2008, 1097) provides a definition of

‘financialisation’ as the increasing role of finance in terms of motives, markets, actors, and institutions in the operation of the financial economies.

## **Governance**

The third group is governance, and draws upon the work of Mallin and Ow-Yong beginning from 1998.

Mallin and Ow-Yong (1998) paper consider AIM companies as split into two groups: first, the internal corporate governance structure of the company organised by the directors and second, an external corporate governance function carried out by the Nomads in their capacity as monitors. Using the admission documents the authors analyse the corporate governance structure of fifty companies and found variations depending on the type of Nomads as advisor (i.e. Nomads who are brokers and Nomads who do not act as brokers) and whether these companies raised new capital on admission or not. The observed differences were in areas of board sub-committees, such as the presence of audit and remuneration committees and the inclusion of a statement of corporate governance policies in the admission documents. Hence, the findings of this article suggest that the Nomad as a broker are more concerned with their reputational risk and hence support the use of the Cadbury Code recommendations for the AIM companies.

A decade later, Mallin and Ow-Yong (2008) analyse annual reports of 300 AIM companies for the period 2005 to 2006, prior to the Rule 26 on AIM companies to maintain corporate websites providing information on financial and governance matters, which came into effect on 20th August 2007. They find high instances of disclosure by AIM companies for corporate governance practices such as inclusion of corporate governance statement, presence of board sub-committees, list of the directors and their responsibilities, splitting the roles of the CEO and chairman. Despite, the recommendation by the QCA Guidelines (2005) in respect of independent directors and a minimum of two independent non-executive directors on board, the adoption of these practices were not observed in majority companies on

AIM. In addition, disclosure on directors' performance and attendance at board was very low. Overall, they find that AIM companies disclosed lower governance practices than recommended by the QCA Guidelines (2005). Accordingly, it is hardly surprising that Baker Tilly and Faegre & Benson report of 2009 (cited in Mallin and Ow-Yong 2010, 228) in their survey of 116 AIM companies and 55 AIM investors show that 58% of institutional investors say that the corporate governance standards in AIM companies were not satisfactory. Fewer than 40% of institutional investors consider them acceptable.

Mallin and Ow-Yong (2010) conduct face-to-face interviews with various participants that include AIM company directors, institutional investor who invest in the AIM companies, and Nomads relating to the role of the Nomad. One concern that is the quality of companies sometimes admitted on the AIM, in particular, for some overseas companies whose home country has weaker corporate governance regulation. Additional concerns were that these companies often operate in environment, which have poor business ethics.

In another study by Mallin and Ow-Yong (2012) on corporate governance disclosures, they examine factors that may influence the disclosure of compliance with QCA best practice on corporate governance for a sample of 300 companies quoted on the AIM for period before June 2006. They use a non-weighted score to develop a disclosure index for 23 attributes from the QCA guidelines 2005. They find that the regression of the disclosure index on the explanatory variables such as increase in the percentage of non-executive directors, board size and company size show a positive and highly significant coefficient. The gearing ratio coefficient is negative and statistically significant, suggesting that equity shareholders expect AIM companies to have good corporate governance structures. Mallin and Ow-Yong (2012) find that company size, board size and the proportion of independent non-executive directors have greater influence for companies to comply with QCA guidelines than ownership factors. In addition, they find that companies that have switched from the main market to AIM tend to have higher disclosure scores, thus maintaining the corporate governance structures that they had adopted whilst on the

main market. Their findings do not support that an AIM company will disclose more corporate governance compliance if their Nomad also acts as a broker does.

The next article co-authored by Mallin on governance in AIM companies is that of Farag *et al.* (2014) where they use a sample of 271 companies, for the period 2000 to 2007, to investigate the impact of ownership (specifically venture capital funds) on corporate governance characteristics using a manually constructed index, CGAIM50 index. They investigate the ownership type and its effect on the company's governance structure. They also estimate the inter-relationship between corporate governance, ownership and financial performance. They find a positive and significant relationship between CGAIM50 index and the venture capital ownership, a causal relationship between corporate governance and financial performance.

## **Others**

Parsa and Kouhy (2008) analyse the disclosures of social information by 90 AIM companies. They state that despite the limited resources the AIM companies in their sample have embraced social reporting to establish and maintain corporate reputation.

Cassia *et al.* (2009) analyse the influence of universities on firm growth focusing on the companies listed on the AIM and the UK main market for the period 1995 to 2006. Their sample consists of 200 companies listed on the AIM and 200 companies listed on the UK main market. Their results show that both university input and output are important determinants of firm growth for AIM companies, but has no influence on the main market companies. Their paper adds to the AIM literature, but also to the knowledge spillovers literature.

Based on the review of published research it is clear that AIM has been successful, and provides an interesting regulatory environment to research.

## 6.9: Conclusion

According to the UK Corporate Governance Code (2010:1), the purpose of corporate governance is to facilitate effective management that will enable long-term survival of the company. Improved corporate governance has the potential to enhance economic development. Although the UK Corporate Governance Code adoption refers mainly to the officially listed companies on the main market, if the smaller companies refrain from benchmarking against the provisions provided in the Code, it may have negative implications in the long- run, and a potential source of future problems. AIM is a lightly regulated marked, LSE acts as regulator as well as exchange owner. It works through the Nomads to enforce appropriate standards for the AIM companies. The support of the QCA and its development of the minimum requirement of corporate governance facilitate a link between the main market and the AIM. This will enable those companies wanting to enter the main market from the AIM to have had time to implement the requirements of the LSE. However, not all of these companies fully or to the same degree will have implemented the requirements of listing on the main market. AIM provides a good example of the use of liberal corporation laws that allow the smaller companies to economise on the costs of political and legal control of the managers, without much interference for the effective operation of market controls. For managers seeking to list, AIM allows companies to adopt the full UK Corporate Governance Code or elements of it and the market will reward the optimal mix that the managers adopt.

In addition, legislation in the UK on ownership suggests that any shareholding greater than 3% should be disclosed in the annual reports or websites of the company, and this gives a rich source of information and transparency to investors. Economically, there is strong evidence of the importance of growth companies to the UK economy. The AIM acts as an initial platform for companies to move its listing to the main market of the LSE. In particular, the number of IPOs on the AIM is higher than in Europe and in the period 2004-2006 the IPOs were more than ten times those on the LSE main market (Meoli *et al.* 2008, s.3.1).

Since the launch of AIM in 1995, corporate governance has been continuously evolving. However, there is paucity of research on AIM companies and

corporate governance, which demonstrates the need and potential for further research into AIM companies. The justification returns once again to the opening theme of this chapter, namely that the AIM model being mimicked by other stock exchanges and AIM is attractive to listing from both UK and international companies. The second part of this thesis contains empirical studies that extend research into governance of AIM companies.

# **CHAPTER 7      OVERVIEW OF THE EMPIRICAL ANALYSIS**

## **7.1: Introduction**

This chapter discusses the research design for the three empirical Chapters (8, 9 and 10) within the context of the Alternative Investment Market (AIM). The next three chapters address whether company level variation in corporate governance practices affects the company's performance. Despite the large number of academic studies, the link between corporate governance and company's performance is not clearly established. Most of the literature focuses on large companies in developed countries and emerging markets. First, this chapter attempts to provide a comprehensive description of the data and research methodology used in this study to ensure that the work is replicable. Second, this chapter attempts to explain the rationale for the various data and methodological choices made in this study.

## **7.2: Methodology**

Prior empirical research on corporate governance uses a wide array of methods, from content analysis, surveys, questionnaires, interviews and econometric methods. The econometric methods include the general ordinary least squares regressions. However, other more sophisticated econometric methods use the simultaneous equations, two and three stage least squares methods and Generalised Methods of Moments (GMM).

In this study, the unit of analysis is the individual company and the list of AIM companies by London Stock Exchange forms the basis for the selection of the sample companies. For this study, the sample comes from a population size of over 1,000 companies listed on the Alternative Investment Market (AIM) (see Appendix, Tables 2 to 4 for the company names for each of the three chapters). In the final sample, the number of companies for each chapter is as follows: Chapter 8 – 56 companies, Chapter 9 – 133 companies and Chapter 10 – 197 companies.

For each of the three chapters, the results of univariate and multivariate regressions are analysed. The ordinary least squares regressions include a set of

variables representing proxies for corporate governance, such as corporate governance index 'CGScore', ownership and executive compensation.

In line with prior studies that examine the relationship between corporate governance variables and company performance, the following regression specifications are used:

*Corporate Governance index* =  $f(\text{company performance variables, control variables})$

*Ownership* =  $f(\text{company performance variables, control variables})$

*Performance* =  $f(\text{corporate governance variables, control variables})$

The sections 7.7 to 7.9 describe the specifications of the common variables, and those variables specific to each of the Chapters 8, 9 and 10 are described in their respective chapters.

### **7.3: Panel Data Analysis**

For the ordinary least squares regression, the data set containing values of one or more variables of interest are collected for several companies, at the same point in time, (for example, Tobin's Q for 50 companies for a specific year). Time series data set contains observations on a single phenomenon observed over multiple time-periods, (for example, earnings per share for several quarters or years). As the number of time-periods involved is not very large, the data set is not quite suited to the econometric techniques appropriate to time series data.

In this thesis, panel data, also known as longitudinal or cross-sectional time-series data, is used. A panel data set consists of both time series and cross section data. Panel data analysis assumes that one is observing the same cross sectional relationship, for example, observing the same companies(n) at different points in time(t), that is, n times t observations (Wooldridge 2002, 143). This increases the efficiency of the estimators due to the increase in the number of observations. Panel data sets moderate the problem of multicollinearity as the explanatory variables vary in two dimensions. Panel data can be either balanced or unbalanced: a balanced panel data set contains an observation for every unit of observation in the time series and the unbalanced data set has missing observations. The most important

methodological advantage of using panel data analysis is that it relates to the concerns of bias resulting from omitted variables. In contrast to the cross-sectional or time series, panel data analysis allows controlling for unit fixed-effects. Most researchers believe that inclusion of fixed-effects in panel data analysis captures the systematic influences from omitted variables. Panel data typically take the form of a set of observations for different periods for the same set of subjects, for example, measures of performance for a group of companies for each year in the time-period observed. Treating the data as panel data allows controlling for variables that otherwise are difficult to observe or measure easily, for example, cultural factors, difference in governance practices across companies, and variables that change over time but not across entities, for example, national policies, international agreements. That is, it accounts for individual heterogeneity. The panel data facilitates minimising inherent problems in statistical inferences arising from endogeneity (see Larcker and Rusticus 2007, 208).

#### **7.4: Fixed-effects Explained**

The variation of the corporate governance data in Chapters 8, 9 and 10 perhaps generates from intercompany variation in corporate governance from one company to another company or the intra-company, that is, variation within each company over time. Therefore, a single cross-section of data would offer only intercompany variation. The fixed effect coefficients absorb all the across company variants. The remaining is the within group variants, which is what is required, simultaneously waning the risk of omitted variable bias.

Since fixed effect models rely on within company variables, repeated set of observations for each company is needed. A significant amount of variation of the explanatory variables within each company is used to analyse longitudinal data with repeated measures on both independent and dependent variables. The fixed effect models have the attractive feature of controlling for all stable characteristics of the companies, whether measured or not. This is accomplished by using only within company variation to estimate the regression coefficients. In general, there would be many unobserved company specific factors that influence the governance variables

in a company that are difficult to satisfactorily measure, such as managerial style and corporate strategy (Conyon 1997, 497). The use of the fixed-effects model will capture the differences that exist about the companies, or the management.

Wooldridge explains that a fixed-effects model can be constructed using dummy variables. The fixed-effect coefficient absorb all the across group actions, and the remaining is the within group action, which is what is required and thereby reduce any threat of omitted variable bias. With fixed-effects, the R-squared will always increase as we are adding more variables (see, for example, Table 9.7). The major disadvantage of using fixed-effects is that we need to watch out for degrees of freedom as the higher number of variables will reduce the degrees of freedom and therefore may 'mess up' the results because of a couple of reasons. First, the fixed effect will absorb so much of the variation in the data that the variable you want to investigate that there is not much of the variable left to explain. Second, sometimes the number of observations is not sufficient without eating up all the degrees of freedom. Therefore, there needs to be a trade-off on doing the right thing between what one considers the best way to model the data, and what the model can support, based on the number of observations available. Consequently, the result will be that the variables are not statistically significant.

Since the sample is a cross-section of companies of varying sizes and from different industrial sectors, so there are likely to be time invariant unobserved differences between companies. This may account for some of the variation in corporate governance variables such as pay and ownership. The example provided by Gormley and Matsa (2013, 31) suggest that, in the analysis of executive compensation there may be a concern about unobserved heterogeneity across managers' skills, risk appetite or personality (see Bertrand and Schoar 2003). Additionally, Gormley and Matsa (2013) also suggest that the unobserved heterogeneity across companies, such as culture, may correlate with the independent variables, for example, size, profitability and CEO age. Since the unobserved effects are likely to correlate with the explanatory variables and to allow for the unobserved heterogeneity, a fixed-effects regression is preferred over a random effects model. Many past studies use 'first difference' approach to remove the fixed company effects (this method was not a preferred choice, as this would result in lost data). The

inclusion of fixed-effects approach removes the unobserved heterogeneity across companies, and so concentrates on those variables that change over time. With the fixed-effects methodology, observations are transformed by subtracting the group mean and running the OLS on these transformed variables. One of the limitations is that the regressions may omit an important explanatory variable, which is, driving the results, and may be correlated with the governance or the company specific variables. I consider that fixed-effects regressions are important because the sample covers a range of different industries, which should be controlled for. However, using industry dummies will require either a large number of additional variables, thus reducing the power of the regression analysis, or only a small number of general industry categories. In either case, using fixed-effects regression is an effective way of controlling for industry characteristics. It is difficult to include all the relevant control variables in the regressions and hence estimating the ordinary least squares model may be fraught with unobservable factors that are correlated with the variables included in the regression. As Gormley and Matsa (2013) conclude, there is need to address unobserved heterogeneity in order to infer causal relations from the data analysed. They find that of the various methodologies available to account for unobserved heterogeneity, the fixed-effects approach yields consistent estimates. These unobservable variables may be time invariant and, therefore, the regressions in Chapter 9 and 10 include fixed-effects.

### **7.5: Endogeneity**

A further problem of using the regression method is that of endogeneity or reverse causality between the corporate governance and performance measures. Not only can corporate governance affect performance, but company performance can also cause the company to change its governance structures (Hermalin and Weisbach 1988). Demsetz (1983, 384) argues that the ownership structure of a company that materialises is an endogenous effect of economical choice in which various costs are balanced to arrive at an equilibrium system in the firm.

Some early researchers in finding a relationship between ownership and performance have ignored the endogeneity, however, others have explicitly allowed

for endogeneity in the quantitative studies on ownership structure and company performance, for example, (Hermalin and Weisbach 1991; Himmelberg *et al.* 1999; Weir *et al.* 2002; Bhagat and Jefferis 2005, 16). Morck *et al.* (1988) and McConnell and Servaes (1990) treat ownership structure as exogenous. However, Demsetz and Lehn (1985) argue that the ownership structure is endogenously determined. In addition, Kole (1994) provides evidence of a reversed causality in the ownership and corporate value relationship. This suggests that the corporate value could be a determinant of the ownership structure rather than being determined by ownership structure. The empirical research has focused on determining the causal effect, if any of company characteristics on ownership and measure of company value, as dependent variables. If there is any causal relationship, that is, by coincidence, for example, the cause of higher performance is because companies have higher ownership by management. However, many studies have not controlled for endogeneity of the explanatory variables due to unobserved company heterogeneity.

A source of endogeneity could arise because of differences in unobserved growth opportunities, where companies may need to raise external finance for expansion and, therefore, find it optimal to improve their governance mechanism. Therefore, if company performance is higher for companies with good opportunities, this in turn could be the cause of endogeneity of governance in the regressions (Klapper and Love 2004, 712). Theory shows as a governance mechanism that institutional ownership reduces agency costs, such as shirking by management. This becomes a problem if ownership is dependent on the performance and the institutional owners invest in companies with higher performance. This is causation in one direction. However, why should the institutional owners invest more in one company over the other if they have similar performance? If this is so then we have reverse causation.

The use of instrumental variables is becoming increasingly common method for researchers to deal with econometric problems related to endogeneity that confound the interpretation of coefficient estimates in corporate governance research. I found that the studies that used instrumental variables were not clear as to the reasons for using these exogenous variables, that is, uncorrelated with the error

term in the models (Gompers *et al.* 2003; Durnev and Kim 2005). Black *et al.* (2006, 369) criticise Durnev and Kim (2005)'s use of instrumental variables as suspect. Hence, Black *et al.* (2006, 368) use an exogenous variation using Korean legal rules for asset size as a reliable instrument for governance to address causality issues, but this unusual local rule does not apply to the UK. Himmelberg *et al.* (1999, 379) suggest the use of company size and stock price volatility as instruments.

Garay and González (2008) use a single equation model with lagged dependent variables as instruments to deal with the complexity of endogeneity. Other researchers, for example, Ozkan (2011, 271) minimise the potential endogeneity problems in executive compensation regression models by using lagged explanatory variables. The argument is that although current values of performance measurements might be endogenous to the ownership structure, it is unlikely that past values of performance are subject to the same problem.

The above section shows that different researchers adopt different techniques to solve the problem of endogeneity; for example, simultaneous equations, two-stage least squares (2SLS), instrumental variable or lagged endogenous variables. Other researchers use the '*differences-in-difference methodology*' to account for endogeneity issues (Bereskin and Cicero 2013, 481). In addition, using lagged values for the explanatory variables could reduce the potential endogeneity issues. For the purpose of this thesis, the contemporaneous data for both the explanatory variables and the dependent variable were preferred over the lagged data for two reasons. First, using lagged values will cause a reduction in the number of observations. Second, in this study due to the nature of the AIM companies, finding continuous data for many companies for more than 3 years was difficult and therefore, using of contemporaneous dependent and independent variables is appropriate for this study. Luo and Jackson (2012) make the same assumption for a sample of Chinese companies listed on the Shanghai and Shenzhen stock exchanges for the period 2001 to 2009.

Endogeneity, principally omitted variable bias, is a major concern. In this study, endogeneity is addressed by using panel data with fixed-effects, in Chapters 9

and 10. Sensitivity to specification is important and, therefore, addresses this by using different proxies for the dependent variable.

## **7.6: Problems with Outliers**

The two common methods available to deal with outliers are ‘trimming’ and ‘winsorising’. The trimming method means that we cut off a certain number of values at each end of the variable, whereby we simply omit the extreme observations. Due to the small sample size, it was felt that winsorising was more appropriate. In a winsorised sample, the extreme observations are replaced with the highest (and lowest) value. Therefore, to deal with extreme values in the variables for corporate governance, financial performance and in the control variables were winsorised at the 1% and 99% levels, (for example, Coles *et al.* 2006, 440). For example, in a sample, size of 1,000 company years values the top and bottom 10 values for each variable were replaced with the 11th and 989th values, respectively. Specifically, in Chapter 10 variables are winsorised for the top and bottom 1% values using the EVIEWS7. Hence, in these two chapters the discussion of the results will be after winsorisation of the variables.

## **7.7: Heteroskedasticity**

The empirical study consists of a series of ordinary least squares (OLS) regressions. The fixed-effects are included to control for differences across the companies in both observable and unobservable predictor and thereby reduce the effects of potential omitted variable bias. As the sample includes multi-year observations, there is likely to be induced heteroskedasticity. In view of the potential existence of heteroskedasticity, the OLS regressions use the correction techniques for unknown heteroskedasticity and the standard errors are constructed using White (1980)’s adjustment for standard errors. Hence, the t-statistics computed from heteroskedasticity robust standard errors are heteroskedasticity –robust t-statistics. The method of adjusting for the standard errors and test statistics is now an accepted method even when heteroskedasticity is suspect. This method is now popular in estimating the coefficients using OLS (Wooldridge 2002, 56). As EVIEWS7 provides the WHITE option in the regression programs, this will be used. Chapter 8

compares the output of the OLS with and without the WHITE option to check for any problems associated with heteroskedasticity for the set of data collected.

The variables fall under three main groups: corporate governance, performance variables and control variables. The next section describes the variables for the analysis.

## **7.8: Corporate Governance Variables**

A number of corporate governance measures are used to gauge the severity of the company's agency costs. These include a manually constructed index of corporate governance attributes, ownership concentration (insider and institutional), remuneration of the top management and board structure (such as size and independence).

### **Ownership**

Agrawal and Knoeber (1996); Cui and Mak (2002, 320) use average managerial ownership measured as the ratio of total managerial ownership to the number of these shareholders. As in some studies, I do not analyse the separate effects of cash flows and voting rights, since in UK equity ownership is a suitable variable to proxy control because of its strong association with voting rights. Hence, in a listed UK company, ownership of ordinary shares and voting control can be regarded as been equal (Cheffins *et al.* 2013). The source for all ownership data is S&P Capital IQ for the years 2008 to 2010. Managerial ownership is a measure of the percentage of equity shares owned by the directors. This definition of managerial ownership is similar to that used by Morck *et al.* (1988); Short and Keasey (1999) and they define managerial ownership as ownership by members of the board of directors. However, McConnell and Servaes (1990) define managerial ownership to include corporate officers and members of the board of directors. The definition by McConnell and Servaes is not applicable to the UK due to disclosure regulations for ownership data for managers is only available for members on the board.

The ownership data was obtained from S&P Capital IQ for the end of each calendar year. The ownership data available was for executive directors, institutional

shareholders and significant non board members. The substantial non board members were not used in the study, as only a small number of companies were available with this information. Extant studies have typically used the aggregated shares held by several largest investors, commonly the largest shareholder, top five , ten or twenty shareholders or the Herfindahl index (see Demsetz and Lehn 1985).

For the AIM samples, in the regression equations, the various ownership data includes that of the CEO shareholdings, managerial shareholdings, the institutional shareholdings, the shares owned by the largest shareholder and the cumulative shares of the top five shareholders. Studies such as Gillan and Starks (2007); Erkens *et al.* (2012) suggest that institutional shareholders and the largest shareholders provide important disciplining and monitoring roles.

### **Listage**

For the AIM, a company's age (listage) is a measure of the number of years since its initial public offering. Listage as a determinant of ownership shareholdings suggests that ownership concentration declines over the maturation of the company. Evidence suggests that listage is negatively correlated with ownership concentration for US companies (Holderness *et al.* 1999; Helwege *et al.* 2007; Fahlenbrach and Stulz 2009) and for UK companies (Franks *et al.* 2009). The company listage measure used is natural logarithm of number of years the company has listed on the AIM. The reasons for decrease in ownership holdings over time is because founders sell their shareholding over time to cash out of the business, issuing more equity for further finance or acquisition and hence diluting ownership of existing shareholders.

### **Duality (DUMMYCEO)**

The UK's framework regards duality in the combined roles of the CEO and the Chair held by a single individual as undesirable because it could give one person too much power over board decisions. Guided by the UK Corporate Governance, the recommendation is to have separate individual head up the roles of the CEO and

chairman, to avoid too much power in a single person, therefore, if the roles are held by separate individual the code is one otherwise zero.

## 7.9: Company Performance Variables

### Tobin's Q

Tobin's Q (TQ) is a standard variable used as a measure of company performance in corporate governance mechanisms studies, often used as the dependent variable. Other things equal, if governance affects company's market value, this should be reflected in TQ, (for example, Morck *et al.* 1988; Mehran 1995; Anderson and Reeb 2003; Gompers *et al.* 2003; Bebhuk *et al.* 2011; Ozkan 2011).

Lindenberg and Ross (1981, cited in Chung and Pruitt, 1994), calculate TQ using a complex formula (see Equation 7.1) as follows:

$$TQ(LR) = \frac{PREFST + VCOMS + LTDEBT + STEDEBT + ADJ}{TOTALASST - BKCAP + NETCAP} \quad (7.1)$$

PREFST refers to the liquidating value of the company's preferred stock. VCOMS refers to the price of the company's common stock multiplied by the number of shares outstanding at December 31. LTDEBT is the value of long-term debt adjusted for its age structure. STDEBT is the book value of non-current liabilities. ADJ is value of the net short-term assets. TOTALASST is the book value of the total assets. BKCAP is the book value of the firm's net capital stock and NETCAP is the inflation adjusted net capital stock.

According to Chung and Pruitt (1994, 70), (CP), the calculation for TQ, as provided by Lindenberg and Ross (1981, 10-16) is computationally complex and the data costly to obtain. The Lindenberg and Ross measure requires separate calculation for the market value and replacement costs<sup>60</sup>. Chung and Pruitt (1994, 71) define TQ as the follows:

$$TQ = \frac{(MKCAP + PS + DEBT)/TA}{TA} \quad (7.2)$$

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<sup>60</sup> Lindenberg and Ross define replacement cost is the dollar outlay needed to purchase the current 'productive capacity of the firm at minimum cost and with the most modern technologies available.

CP define MKCAP as the product of share price and number of shares outstanding; PS as the liquidating value of the preferred stock; DEBT as the sum of book value of short and long term debt and TA as the book value of the total assets. The definition of TQ by CP differs from LR, in assuming that the replacement value of company's plant, equipment and inventories are equal to the book value.

The definition of TQ used in the three empirical chapters is the sum of the market value of equity (product of closing stock price and common shares outstanding) and the book value of total assets minus the book value of equity divided by the book value of total assets. This definition approximates TQ, as the replacement value of assets is difficult to obtain for the AIM companies.

As is commonly shown in corporate governance studies, the TQ significantly skews to the right with some companies having extremely high values, which could significantly influence the interpretation of the results. Hence, the outliers were removed with TQ greater than 13. One of the reasons is that some AIM companies had extremely high values, which would significantly influence results for empirical analysis without representing the common patterns. This follows other studies such as Klapper and Love (2004, 708) who exclude companies with TQ greater than ten. McConnell and Servaes (1990, p.600) use a tighter definition for outliers and delete companies with TQ greater than six. To maintain consistency with the other variables, TQ was further winsorised at 1% and 99% (see section 7.6).

### **Return on Assets (ROA)**

In contrast to TQ, ROA is a historical measure, therefore, backward looking and does not reflect the future impact of management decision making. ROA measure also suffers due to manipulation, because of creative accounting by the managers. In addition, the managers may follow short-termism behaviour, which may adversely affect the long-term shareholder value. But ROA (or other accounting indicators such as EPS, EBIT) has an advantage over share price indicators in that they are not subject to the unexpected shocks of the stock market performance. Share price is a noisy variable and therefore, subject to greater variability due to the unexpected events in the stock market.

## **Comparing Tobin's Q and ROA**

The majority of the studies on corporate governance have used TQ rather than accounting profit measures. ROA (ROE is used in some studies instead of or as well as ROA) measures profitability and efficiency, while TQ captures market expectations about future earnings. The two performance ratios, TQ and ROA, differ in their time orientation since the accounting profit ratios are backward looking, that is, using historical data compared to the TQ, which is considered as forward-looking. The accounting profit ratios are a measure of what management has accomplished, whereas TQ is an estimate of what management will accomplish. The advantage of using TQ is that it is a forward-looking measure and considers what the investors anticipate of the future and therefore does not reflect what the managers have currently achieved, but takes the view of what is likely to be achievable in the future. It considers that financial markets are efficient and that the company's market value is an unprejudiced estimate of the present value of its cash flows (Lang and Stulz 1994, 1253) . TQ and ROA may be strongly correlated, but both measure different aspects of performance; TQ as a measure of market valuation of the company and ROA as a measure of operating performance (Klapper and Love 2004).

Because agency theory does not categorise the precise procedures for measuring the relevant accounting and market performance variables, hence according to the extant literature the performance measures selected are TQ and ROA. Furthermore, TQ, ROA and stock return as measures for company performance are highly correlated (Landsman and Shapiro 1995) and ,therefore, this should not affect the empirical results. The denominator in the definitions of both ROA and TQ includes the book value of total assets and not the replacement costs as per the theoretical definition of TQ. This suggests that ROA and TQ will have a strong correlation. This is not an issue as both TQ and ROA, as performance variables, are used in separate equations. Since stock return is not used, this will avoid the complications of high price volatility and low liquidity as described as present in thin markets and it could be argued in this sample of study that the share price does not always reflect the true market value of each company.

## **Other measures of performance**

The Market-to-Book (MBV) ratio definition is the market value of a company's equity divided by the book value of equity. Short and Keasey (1999, 89) call this 'valuation ratio' and substitute this ratio for TQ as measure of company performance. Wintoki *et al.* (2007) define TQ as market to book ratio. They suggest that TQ is a proxy for growth and there is strong theoretical basis to assume that growth opportunities are a cause, rather than a consequence, of governance structures. Therefore, they use market to book ratio as a control variable. Due to the skewness of the TQ and MBV, some authors use the log form of these variables.

The other common measure used is stock return as a measure of company performance (Jensen and Murphy 1990b). Other measures of company performance used in prior studies on corporate governance are net income, earnings per share, return on equity and return on assets as accounting measures of performance. Fogelberg and Griffith (2000) use economic value added for a sample of bank holding companies and find a curvilinear relationship between management ownership and company performance.

## **7.10: Control Variables**

### **Company Size**

The literature shows various measures for company size. Demsetz and Lehn (1985) suggest that ownership is a function of company size, and hence they use the average market value of common equity (p.1164). An equity-based measure suggests, that for a large company, reflects higher investment by the owner, for a given proportion of equity. Morck *et al.* (1988); McConnell and Servaes (1990) use the logarithm of replacement cost of assets as their measure of company size. Himmelberg *et al.* (1999, p.364) uses logarithm of company sales and its square as a measure of size. Demsetz and Villalonga (2001); Drakos and Bekiris (2010) use the natural logarithm of total assets to proxy for the size of the company. Durnev and Kim (2005) prefer to use sales, as sales have a low influence from earnings manipulation and accounting rules. Farag *et al.* (2014, 7) use the natural logarithm of market capitalization as a proxy for firm size. Gabaix *et al.* (2014) use different

proxies for firm size, namely total firm value, earnings before interest and taxes (EBIT), sales and equity value.

For this study, the natural logarithm of total assets, LOG (TA), is preferred over the absolute value to avoid heteroskedasticity and spurious correlation. The company size, LOG (TA), is expected to produce a positive indication with corporate governance variable or company performance as dependent variables. The weakness of using an accounting measure of company size is that it omits unrecognised assets such as many intangibles – such assets may be particularly important for some AIM companies.

### **Leverage (Debt)**

Leverage (DEBT) is defined as the total liability (sum of current and non-current liability) over total assets (Bhagat and Bolton 2008; Farag *et al.* 2014). Debt is defined to include short-term debt and long-term debt, since it is observed that some of the companies do not have long-term debt but all have short-term debt. Due to high financial risk associated with high debt ratio, the CEO ought to receive higher pay to take on additional risk. Literature suggests that debt can act as an effective corporate governance mechanism by minimising the managerial agency costs of free cash flow. Other researchers have used debt as a ratio of long-term debt to total assets (Bebchuk *et al.* 2011), but this study uses the sum of current and non-current liability to calculate debt as due to the size of the companies, there were companies with nil non-current liability. Debt was included in order to monitor the likelihood that debt holders strongly influence the management of companies (Short and Keasey 1999; Demsetz and Villalonga 2001). Debt is included to control for a number of factors. First, high levels of debt can help increase the size of the company, thus help to overcome owners' wealth constraints (Stulz 1988). Second, high debt levels could constrain the managerial discretion due to the obligation to pay out future cash flows (Grossman and Hart 1982) and reduce the possibility of extracting perquisites by managers in control, thus reducing conflict between managers and shareholders.

### **Market capitalisation (MKVAL)**

Market capitalisation (MKVAL) is a measure of the product of the number of outstanding shares and the market price as a variable is used as a measure of company size. The logarithm of market capitalisation is used as an alternative measure for company size (see Farag *et al.* 2014).

### **Volatility (VOL)**

The exogenous variable for standard deviation, VOL, has been used by Demsetz and Lehn (1985); Loderer and Martin (1997); Holderness (2009). VOL satisfies the intuition that higher volatility creates stronger incentives for outsiders to take over managerial responsibilities. Therefore, managerial ownership should be positively related to volatility. The volatility is measured as the standard deviation of monthly return on a company's stock for each year. The variables VOL and its variance, VOL, squared have been used by Demsetz and Lehn (1985); Loderer and Martin (1997) as control variables. According to Demsetz and Lehn, the two variables are proxies for 'control potential' and higher share price volatility makes it harder for small shareholders to monitor managers. Therefore, unmonitored managers may be unrestrained and exhibit self-serving behaviour, thereby cause a decrease in the share prices. The lower share prices will be attractive for outsiders to purchase shares in the company. If the outside investors have accumulated sufficient shares, they are able to monitor managers, and prevent expropriation by the managers. This suggests that the higher the volatility, the larger the holding of outside ownerships. Demsetz and Lehn contend that this relationship is concave. As a result, managerial ownership (even outside block holdings) should be positive for volatility. If the relationship is concave, the variance should be negative.

### **Capital expenditure (PPE/S)**

I control for capital expenditure in the regressions. This is measured as property, plant and equipment divided by total assets. As long as investments in fixed assets are observable and, therefore, more easily monitored, companies with higher investment in fixed assets will have a lower level of managerial ownership.

## **Cash Holdings (CASH/TA)**

According to Jensen (1986), the higher the company's free cash flow, the higher is the desired level of managerial ownership. Free cash flow measured as operating cash flow less capital expenditure is an important measure that represents the amount of cash required for the company to expand and pursue its objective to enhance shareholder. Due to the variability between both operating cash flow and capital expenditure for the AIM companies, the use of cash and cash equivalent can be a proxy for cash. For this study, the variable cash is a measure of the cash and cash equivalent divided by total assets. The cash holdings, CASH/TA, (see Bigelli and Sánchez-Vidal 2012, 29), is considered as the liquidity necessary to support the working capital needs of the company. The cash and cash equivalents is easily available from the cash flow statement.

### **7.11: Data and Sources**

The corporate annual report and their websites are the main medium of disclosing corporate governance in UK. There are several advantages of using annual reports for information on the corporate governance disclosure and financial data as the reports are publicly available on a regular basis, required by legislation and produced by all companies, thus making comparisons quite easy. In addition, other authors have relied on the annual reports because of the greater credibility associated with information disclosure and stakeholders use the reports as a source of information (Deegan and Rankin 1997). The corporate governance report is generally available after the Directors' report. Its content varies, but it includes an introduction, comment on the board of directors, board committees, internal control, going concern, shareholder relations and directors' compensation report. In this study, the data can be categorised into two main areas: governance measures and financial data. The sample in each chapter is drawn from companies listed on the London Stock Exchange (LSE) Alternative Investment Market (AIM), comprising of non-financial companies. The official list of all the companies listed on the AIM is available from the LSE website. Similarly to other researchers, the companies in the sample exclude financial companies, real estate and investment trusts (see Farmer *et al.* 2013, 91). The source of company specific data includes the annual reports,

DataStream and S&P Capital IQ. The annual reports were downloadable in electronic formats from the company's website, Google or Northcote.

The sample data sets for each of the three chapters are separate, and this reflects the different research question(s) for each chapter (see Chapter 1), and the difficulty in obtaining the data and hence the small sample size compared to other governance studies.

Specific to Chapters 9 and 10, the data for ownership, compensation and company financial information are obtained from S&P Capital IQ and a sample manually checked using the company's annual reports. Prior to rejecting any company from the sample, the annual reports are checked for any missing data. Data relating to a sample of companies were manually checked, using the companies' annual reports to crosscheck the figures from the S&P Capital IQ. The annual reports were searched using the key words relevant to each chapter. To maximise the sample size, where the data was missing from S&P IQ Capital, the annual reports were used to supply the missing data. Despite the change in the rules for the AIM companies to maintain a corporate website (s26 AIM Rules for Companies, 2014)<sup>61</sup> there were some companies that did not have an electronic copy of their annual reports and hence were not included in the sample. On hindsight, this would have made interesting information to analyse as to the number of companies that did not maintain their corporate websites with appropriate information as a transparency measure. However, the researcher did not maintain a detailed log of the number of companies that did not have annual reports on their websites.

## **7.12: Financial Crisis**

This section provides some evidence as to why corporate governance is related to company performance during the financial crisis, since the selection of the

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<sup>61</sup> <http://www.londonstockexchange.com/companies-and-advisers/aim/advisers/aim-notice/aimrulescompaniesmay2014.pdf>. This is the latest AIM RULES, prior version were in 2007, 2010

sample falls within the 2008-2009 financial crisis. While corporate governance may not be root cause of the economic crisis, but it is not blameless(Conyon *et al.* 2011a). As per Erkens *et al.* (2012), the beginning of the financial crisis period is 2007. For this thesis, the studies on AIM coincide with the financial crisis period of 2007-2008 and assume that all financial and non-financial companies are affected.

Muller-Kahle and Lewellyn (2011) using paired US financial firms find that board tenure is negatively related to subprime lending adding that younger boards may be too inexperienced to be effective. Busy boards may form ineffective boards for overseeing risky strategic initiatives and that board gender diversity negatively influences the decision to focus on subprime lending. Grove *et al.* (2011) examine 236 US banks prior to and during the crisis. They use 11 different firm level governance factors and find only a few were significant and in the predicted direction. For example, they find a positive association between the level of block ownership and ROA, a negative association between CEO duality i.e. combination of the role of the CEO and the Chairman, and performance. Consistent with agency theory, their findings confirm that CEO duality indicates a weakness. They challenge that single corporate governance attributes may be found significantly associated with performance but, when studied as elements of a comprehensive set of corporate governance attributes, they are marginally significant. In agency theory framework, some insider-related mechanisms such as insider representation, CEO duality and affiliated committees may be ineffective at mitigating agency conflicts for banks. This can be explained using Donaldson and Davis (1994) explanation on stewardship theory as the roles of the insider representation and CEO duality may not be monitoring but seen as empowering governance structures.

### **7.13: Corporate Governance Disclosure and Company Performance**

The research in Chapter 8 uses corporate governance mechanism themes, as key elements of good corporate governance, such as board committees, board independence, board transparency, board power and remuneration disclosures, to construct a ‘Corporate Governance Score’ (‘CGScore’)and to examine its

relationship with company performance and other company characteristics. The extant literature does not provide a systemic way of establishing the relative importance of various governance mechanisms and hence how to select a meaningful set of weights. In addition, the number of items selected may be very large and, therefore, time consuming to create an index manually. Hence, a simple yes or no allows the construction of the CGScore. All variables have a binary coding where I use one if the answer is 'yes' or zero if the answer is 'no'. The final sample of companies' selection was on the basis if they had publicly available information. The study uses a small sample size of over 50 companies listed on the Alternative Investment Market for the two-year period 2008 and 2009. As the construction of corporate governance index required the use of manually extracted information from companies' annual reports, only a small sample set was feasible.

The CGScore index is a measure of disclosure, as it is not possible to infer, from the presence or absence of a particular corporate governance practice, that governance in a given company is or is not effective. The study of disclosure is important as companies listing on the stock market besides having access to the finance have an incentive to disclose all available information to obtain higher prices as non disclosure may cause investors to assume the worst.

For the financial years 2007 to 2009, financial data were collected from the companies' annual reports. The first year, 2007, was necessary in order to collect data for lagged variables. All financial data are reported in sterling pound, and any reports using a non-UK currency were converted to the sterling pound using conversion rates available at the date of the company's year-end. The final sample consists of 56 companies in 2008 and 53 companies in 2009.

#### **7.14: Managerial ownership and Company Performance**

The research in Chapter 9 examines the relationship between ownership and company performance in AIM companies using two themes. First, focus on the determinants of ownership structure and following the theme that governance issues arise from the separation of ownership and control, the managerial ownership of

equity shareholdings is a mechanism that aligns the interests of the principal with those of the agents. The empirical discussion is as follows: first, for the determinants of ownership structure, the general hypothesis examined here is that there is a linear relationship between the equity ownership and company performance. Different measures of ownership concentration are regressed on identical sets of explanatory variables. Second, as per Demsetz and Lehn (1985), the profit potential from owning shares is correlated with the instability in the company's environment and the relationship is non-linear. In accordance with Demsetz and Lehn, volatility is used as a measure of instability, and the square term of volatility is used to allow for non-linear relationship between the ownership and volatility.

The second major focus of Chapter 9 is to examine whether the company performance has linear or non-linear relationship to the director ownership shareholdings. The analysis follows the Short and Keasey (1999, 86) and tests for linear and cubic relationship between the company performance and managerial ownership. Three different forms of managerial ownership are used in the regression analysis. These are percentage of shares owned by directors, its square form and the cubic form. This avoids using arbitrary levels of ownership as per prior literature such as (Morck *et al.* 1988). The other ownership variable used is the institutional ownership holdings, largest shareholder and the largest five.

This chapter includes a test for a non-linear relationship with the largest shareholder ownership and the largest shareholder ownership squared. Ordinary least squares regressions estimates on three alternative measures of company performance, TQ, ROA and MBV. In all the regressions, control variables include company size, debt, cash and cash equivalents divided by total assets, property, plant and equipment divided by total assets, dummyceo, listage of the company on the AIM and director independence.

Demsetz and Lehn (1985); Morck *et al.* (1988); McConnell and Servaes (1990) use pooled observations for their sample companies across several periods. This assumes that the impact of management shareholdings is stable over time.

However, this is unlikely in practice, and hence using panel data analysis should allow for observing any changes over time. Using panel data also makes it easier to control for unobservable intercompany-differences hence may be more appropriate for the study of the relationship between ownership and company performance.

The final sample consists of 133 companies for the period 2008 to 2010. The sample selection includes a maximum of three largest companies by the market capitalisation from each industrial sector. In some sectors due to missing data, one or two companies were possible to be included. The resulting sample consists of a broad cross section of companies of different sizes. This sample should enable to determine the extent to which ownership has an impact on company performance for a broad range of industries, unlike other studies on large companies, which have focused on specific industries.

### **7.15: Remuneration and Company Performance**

The research question in Chapter 10 is to examine the relationship between the link between managerial remuneration and company performance. As discussed above the ordinary least squares with company fixed-effects are the preferred method for the empirical research. The dependent variable, executive remuneration, is measured as CEO pay, highest paid director, total remuneration of the board and the ratio of CEO pay to total directors' remuneration including that of the CEO. As before, the measures of the company performance are included from prior literature as TQ, ROA and market to book value (MBV). In all the regressions, it is necessary to control for other factors that may affect company performance and remuneration. These control variables include company size; debt; property, plant and equipment divided by total assets; DUMMYCEO; board size; and a founder receiving remuneration who is a member of the board.

#### **Criteria for sample selection**

The inclusion of an AIM company within the sample were subject to a few criteria such as availability of published annual reports for the period 2008 to 2010 (and 2007 for lagged TQ and ROA), the corresponding financial information must be

available for all the three years. All monetary data to be in Great British pound (GBP), and any foreign currencies converted to GBP using the year-end conversion rates provided by S&P IQ Capital. A balanced panel data for analysis is preferred to for analysis spanning several consecutive years of data, (for an explanation of the use of balanced data see section 7.3), however some data were lost and hence a balanced data set was not possible.

The requirement of a minimum of three consecutive years of data on each AIM company potentially may introduce a survivorship bias in the sample selection because poorly performing companies are more likely to cease to exist or are acquired by other companies. Due to the potential bias, the results may lean towards finding a positive relation between corporate governance variable and company performance. This study uses panel dataset in both Chapters 9 and 10 over a three-year period, as this would make it possible to ascertain whether the observed cross sectional and time series properties of the corporate governance variables and its association with company performance also hold over time.

The objective of Chapter 10 is to analyse the relationship between management remuneration, company performance and ownership shareholdings. This study offers a significant contribution to the existing literature in the following ways: first, it focuses on publicly held smaller growth companies. Most of the prior research has focused on CEO remuneration based on larger listed organisations. Comparing previous research with the results from this research, will ascertain if studies on larger companies can be generalised to smaller organisations. Second, the data uses different forms of remuneration such as salary, bonuses, directors' fees, other remuneration and options. Third, since the companies are young, the presence of the founder may have a positive impact on the level of the remuneration. Fourth, the regressions assess the influence of company specific characteristics as well as governance characteristics.

The focus of the chapter is on the relationship between the performance of the company and CEO remuneration. However, the executive remuneration in the form of highest paid director (HPD), total pay of all the directors on board (PAYT)

and the ratio of CEO remuneration over total directors' remuneration are also tested. Two proxies used for company performance are Tobin's Q (TQ) and return on asset (ROA). For robustness, the market to book value is tested. While other studies have used average or lagged values, to reduce endogeneity issues. TQ and ROA may be considered to be substitutes for each other, due to the same denominator used in calculating both variables, however, both measures represent a different type of performance as discussed in section 7.5.

In addition to the performance, other company specific factors that could affect CEO remuneration are tested. These are company size, cash and cash equivalent over total assets, property plant and equipment scaled by total assets, leverage. Share ownership by CEO, director ownership and institutional ownership may influence CEO remuneration. Other governance variables used were board size, CEO/Chair duality and founder. Other studies have used characteristics specific to a CEO such as age, education, gender and ethnicity. Due to lack of consistency in obtaining the data and poor disclosure in the annual reports, the CEO attributes were not used in the analysis.

In this chapter, a sample of 197 AIM companies over the period 2008-2010 is used. As a starting point, the sample is constructed by determining the ownership data available for the period 2006 to 2010 - from a list of 627 companies provided to S&P Capital IQ, who then provided remuneration data for 615 companies. From this list, a large number of companies were deleted for the following reasons: lack of data on CEO remuneration and director remuneration over the period 2008 to 2010; lack of data for the computation of TQ value, debt, cash and cash equivalent; property, plant and equipment and negative shareholders' equity.

The main reason for limiting the selection of companies on the Alternative Investment Market (AIM) to the period post 1 January 2007 is that they are required to produce year-end consolidated and interim financial statements in accordance with the International Financial Reporting Standards (IFRS). IFRS was rolled out in January 2007 for those companies listed on the AIM. The decision not to go back

beyond these years is to ensure that the AIM companies are all reporting using the same International Financial Reporting Standards and, therefore, obtain consistency in the reporting of financial data . In this study, a sample of LSE AIM companies existing over the period 2008-2010 is used. The data source for compilation of sample is the LSE list of AIM companies. S&P CAPITAL IQ and annual reports of the companies is used to obtain the details related to remuneration, ownership and financial data.

### **7.16: Conclusion**

The discussion presented in this chapter provides a guide to the methodology, reasons for using panel data, fixed-effects, problems with outliers, and endogeneity issue. It then discusses the variables used for corporate governance, company performance and control variables. It gives a brief discussion of the data and sample and a synopsis of each of the three empirical chapters. The final part of the thesis involves three empirical investigations of corporate governance measure and its impact on company performance. A review of the related literature is contained within each empirical chapter.

## **CHAPTER 8      CORPORATE GOVERNANCE SCORE**

### **8.1: Introduction**

The aim of this chapter is to increase the understanding of corporate governance characteristics such as board structure, director independence, transparency and remuneration on the variation of the voluntary disclosure regarding corporate governance practices for the Alternative Investment Market (AIM) companies. This chapter examines the relationship between the quality of a company's corporate governance practices, measured as an overall corporate governance score (CGScore), company performance and ownership holdings of a sample of the AIM companies in 2008 and 2009. The sample contains 56 companies randomly selected from all AIM companies. However, 53 of these companies are included in 2009. The annual reports for these three companies were not available as these companies delisted from AIM in the second year. The information available in the annual reports of the companies in the sample enables the construction of the corporate governance score.

The chapter first provides evidence on the extent and nature of disclosure in AIM companies' annual reports, in respect of information on board committees, board independence, board transparency, board power and executives remuneration to develop an overall governance index. Second, more substantial objective of the study is to test the hypothesis about the key determinants that influence the corporate governance score, that is, does overall corporate governance disclosure result from higher company performance or, is it that the individual attributes that have an impact on company performance.

This chapter involves a manual construction of corporate governance disclosure index using some of the key recommendations from the Combined Code 2008 (revised UK's Corporate Governance Code 2012, see Chapter 4). The regression results of this chapter, using a sample of 56 companies, first shows that although there is a positive relationship between corporate governance attributes measured by the corporate governance score (CGScore) and company performance,

but is not statistically significant. Secondly, there is a non-linear relationship between CGScore and director ownership and the largest shareholder. However, the non-linearity is not shown when using institutional share ownership and the relationship is not significant. Intuitively, it could be argued that institutional share ownership could lead to higher corporate governance practices. Thirdly, using company performance as the dependent variable the coefficient is positive, but statistically insignificant.

This chapter contributes to other studies that use company level corporate governance indices to examine the relationship between overall corporate governance and company performance, specifically where a second tier stock exchange is available. The quality of a company's governance is dependent on several factors such as board structure, remuneration structure and ownership structure. A common practice in prior research is the use of a corporate governance index as there is evidence that a broad measure of company level corporate governance predicts higher share prices (Black 2001; Klapper and Love 2004; Garay and González 2008).

The organisation of this chapter is as follows: sections 8.2 to 8.4 describe disclosure of voluntary information and the 'content analysis' as a research method. Then section 8.5 reviews the literature on the relationship, at the company level, between corporate governance and performance. Sections 8.6 to 8.8 describe the sample, variables, the construction of the corporate governance score and the hypothesis. Section 8.9 discusses the OLS results. Section 8.10 discusses the robustness. Section 8.11 concludes. The rest of the chapter include the research limitations and further research.

## **8.2: What is Disclosure?**

Disclosure can be either mandatory or voluntary. For example, disclosure of useful information by managers to users is by means of the mandatory interim and the annual reports of the company. In addition, companies also provide additional or voluntary disclosure, and this includes management's forecasts, presentations and press releases of material issues (Healy and Palepu 2001, 406). Why do users need

disclosure of both financial and non-financial information? There is consensus that where there is the separation of control and ownership (Berle and Means 1932) shareholders require timely information. Since, the shareholders delegate the task of running the companies to managers, and the former are reluctant to participate actively in the companies where they hold shares. The managers who are self interested will create agency costs by acquiring perquisites, pay exorbitant remuneration to themselves and engage in empire building by making decisions on activities that may be harmful to the shareholders (Jensen and Meckling 1976). The two main concepts that introduce agency costs are information asymmetry and the inherent conflicts between the managers and the shareholders.

The corporate governance mechanisms that have been extensively studied include internal to the company are the board and the equity ownership structure (see Denis and McConnell 2003). The board's responsibility is to monitor and discipline the management. The external mechanism, the market for corporate control, including the threat of hostile takeovers and proxy contests will mitigate agency problems.

### **8.3: To Voluntarily Disclose Information or Not**

Healy and Palepu (2001) suggest voluntary disclosure as the additional information released to the market, directly as a result of the managements' insider knowledge of the company, but often not required for publication in the regulated reports. Gray *et al.* (2001, 351) refer to voluntary disclosure, as been both disclosures in mandatory and non- mandatory areas. The former includes that required by law or codes of best practice, and the latter refers to disclosure beyond what is legally required.

The use of narratives within annual reports provides the opportunity to explore corporate governance reporting. Why would the companies report if there were no legal requirements to do so? Voluntary disclosure is a device that has moderating effect due to information asymmetry between the principal and the agent. One of the reasons to determine the level of governance information is because it brings benefits to the company in terms of the bottom line and reduces uncertainty

relating to the board. In particular, for the AIM companies, higher disclosure of governance information enables companies legitimately to exhibit greater transparency and credibility with the shareholders and other stakeholders. Consequently, may reduce managerial opportunistic behaviour and information asymmetry. Adoption of internal control mechanisms such as; board committees, non-executive directors, separation of the roles of the chair and the chief executive officer, may enhance monitoring quality in strategic decision-making activities. Further, companies may disclose corporate governance recommendations to appear legitimate for both social issues and to avoid incurring costs of non-legitimacy Skinner (1994). In addition, companies may also accommodate key stakeholders' demands for their long-term survival.

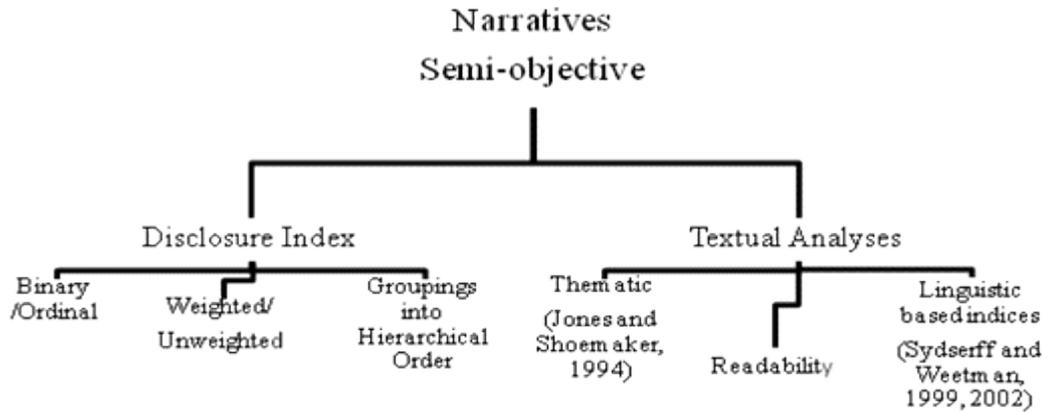
#### **8.4: Content Analysis**

A brief description of the method commonly used in disclosure analysis of content analysis follows in this section, as it helps to construct the governance disclosure index for the AIM companies. Davison (2011, 258) suggest that accounting research often use narratives for analysis. However, the use of narratives is profusely extended to corporate governance and corporate social reporting research. Beattie *et al.* (2004, 208) suggest that researchers using the narrative analysis of annual reports can use the financial analysts' view. However, the financial analysts' view as a source of disclosure is subjective and restrictive. Nevertheless it is a popular source, for example, Lang and Lundholm (1993) use the voluntary disclosure, as measured by disclosure scores, provided by the Financial Analysts Federation, also known as Association of Investment Management and Research (AIMR). However, AIMR discontinued its disclosure rankings in 1997, and the UK does not have similar rankings. Lang and Lundholm (1993) assume that the ratings measure disclosure 'informativeness'; however, there are concerns due to information bias towards the analysts' perceptive.

The second approach is the semi-objective, (see figure 8.1) in which content analysis is the main method. This semi-objective method is broken into two types of narrative disclosure: disclosure index studies or textual analysis. According to

Beattie *et al.* (2004), studies using disclosure index use the concept of content analysis (or thematic).

**Figure 8.1: Different Approaches to the Analysis of Narratives**



Source: (Jones and Shoemaker 1994; Sydserff and Weetman 1999; Sydserff and Weetman 2002; Beattie *et al.* 2004, 209).

## 8.5: Literature Review

### Measures of Corporate Governance Indexes

A major task involved in the creation of the index is the appropriate selection of items, for example, words, phrases and numbers reported in the annual reports. The number of items selected has ranged from a low of 17 (Barrett 1976) to a high of 224 items Cooke (1989, 115). The availability of commercial company level information has seen a surge in the development of corporate governance index and its use in the empirical research. Some of the commonly used specialist companies include Institutional Shareholder Services (ISS), Governance Metrics International and The Corporate Library (see Table 8.1). ISS includes corporate governance information of 5,300 US companies and 2,400 non-US companies such as Canada, Europe, East Asia and Pacific. The non-US companies are large and belong to the main stock exchange of their respective country stock markets. In 2010, RiskMetrics acquired ISS. In 2010, Governance Metrics International merged with The Corporate Library. The Corporate Library uses a proprietary weighting scheme to include over a hundred variables on board characteristics, management remuneration policy and anti-takeover measures. In addition to the above, similar governance rankings were

produced by Deutsche Bank for Latin American countries, Deminor Rating for Western European countries, and S&P 500 is producing rankings for both developed and emerging markets (Klapper and Love 2004).

Cerf (1961)'s study was the first to use a disclosure index, using the financial reports of 527 companies for the period 1956-1957 and empirically examines voluntary disclosure. The disclosure index consists of 31-weighted items, and the index is positive with asset size, number of shareholders and profitability. Singhvi and Desai (1971) follow a similar research method and find that companies disclosing poor information tend to be small, free from listing requirements, audited by small accounting firms, less profitable and have more volatile stock prices. Although these studies use accounting information for the disclosure index, but the adoption of this is equally valid for constructing a corporate governance index.

Using an index as a composite measure of corporate governance variable is widely used and has a broad geographical coverage. For example, Gompers *et al.* (2003); Brown and Caylor (2004); Bebchuk *et al.* (2009) use US data, Drobetz *et al.* (2004) use data from Germany, Toudas and Karathanassis (2007) use data from Greece, Cheung *et al.* (2007) use Hong Kong data, Black *et al.* (2006), uses Korean data Beiner *et al.* (2004) uses Swiss data and Hodgson *et al.* (2011) uses data from Thailand. Table 8.1 distinguishes between two types of empirical research in respect of the identification between corporate governance, measured as an index, and company performance. These studies use an index based on researchers' personal method or studies that have purchased a commercial corporate governance ratings.

**Table 8.1:A Summary of Research Using a Corporate Governance Index**

<i>Authors</i>	<i>Country</i>	<i>Source of Data</i>	<i>Corporate Governance Attributes</i>	<i>Performance Variables</i>	<i>Other Controls Variables</i>	<i>Method</i>	<i>Comment</i>
<b>Panel A: Questionnaire survey or hand collected data from publicly available information</b>							
Beiner <i>et al.</i> (2004)	Swiss Stock Exchange 109 companies	Questionnaire survey	38 governance attributes: CG commitment; shareholders' rights; transparency; management and supervisory board matters and auditing	TQ; ROA	Beta; growth; log (assets); log (age); leverage; dummy industry; endogenous variables:	OLS; Simultaneous equations	Corporate governance index (CGI ), board size; shareholding of management have a significant influence on firm valuation.
Drobtz <i>et al.</i> (2004)	Germany 91 companies 2002	Questionnaire survey	'principal portfolio' firms with the highest governance quality corporate governance rating (CGR)>21; 'agent portfolio': firms with the weakest governance quality CGR<18	TQ; market to book ratio	Beta; growth; log(assets); log (age); leverage; dummy industry	Three-factor model Fama and French (1993)	Significantly positive correlation between CGR and measures of return and firm value; firms with better governance practices were large firms contrasts the finding of Gompers; Ishii & Metrick (2003).
Black <i>et al.</i> (2006)	Korean Stock Exchange 515 companies	Survey of corporate governance practices in 2001	Index based on 38 variables	TQ; market to book ratio; market to sales ratio	Ln(assets); Ln(years listed); debt/equity; sales growth; R&D/sales; PPE/Sales; Capex/Sales; market share; share turnover; ownership; dummy variables for ADR; bank and industry	OLS; 2SLS; 3SLS	A causal link between corporate governance and the market value. Better corporate governance does not appear to predict higher firm profitability.

<i>Authors</i>	<i>Country</i>	<i>Source of Data</i>	<i>Corporate Governance Attributes</i>	<i>Performance Variables</i>	<i>Other Controls Variables</i>	<i>Method</i>	<i>Comment</i>
Cheung <i>et al.</i> (2007)	Hong Kong 168 companies	Publicly available information	Weighted corporate governance score	Market to Book ratio	Size; ROA; leverage; current ratio; board characteristics; shareholdings of top 5; CEO duality; audit /compensation committee; ADR; MSCI		Significant and positive relationship between CGI and Market to book ratio.
Garay and González (2008)	Venezuela	Authors fill up the questionnaire using publicly available data;	CGI based on 17 questions	Market to book ratio; dividend payout and TQ	ROA; leverage; size	OLS	Reduce the cost of capital and enhance market valuation when firms improve corporate governance practices.
Black <i>et al.</i> (2010)	Sample of 66 Brazilian companies 2005 and 2006	Survey questionnaire with 88 responses	41 firm attributes	TQ	Firm characteristics	OLS with firm random effects; Pooled OLS	Statistically significant relationship between BCGI index and firm market value.
Black <i>et al.</i> (2012)	Brazil 66 private; nonfinancial Brazilian private companies; which responded to the Brazil CG Survey 2005- comparison of BRIC countries	Hand collected CG Survey 2005	Overall index results derive mostly from subindices for ownership; board procedure; and minority shareholder rights. Others include disclosure and related party transactions	Natural logarithm of TQ	Ln(assets); firm age; leverage; sales growth; net income/assets; EBIT/sale; PPE/Sales; share turnover; largest shareholder ownership; industry dummies; and ADR dummy	OLS	An overall index predicts Tobin's Q in all four BRIC countries.

<i>Authors</i>	<i>Country</i>	<i>Source of Data</i>	<i>Corporate Governance Attributes</i>	<i>Performance Variables</i>	<i>Other Controls Variables</i>	<i>Method</i>	<i>Comment</i>
Mallin and Ow-Yong (2012)	UK 300 AIM companies prior to June 2006	Hand collected from companies' annual reports	23 Attributes of the QCA guidelines 2005	none	Percentage shareholdings of institutional investors and directors; board size; proportion of NEDs; log(assets); gearing; dummy variables for Broker Nomad; ex-main market; if company has gross turnover	OLS	Coefficients of board size and proportion of NEDs are positive and highly significant. Gearing is negative and significant.
Farag <i>et al.</i> (2014)	UK 271 AIM companies in 2000 to 2007	Hand collected from companies' annual reports and websites	CGAIM50 index; consists of 50 items based on AIM regulation	ROA; TQ	Venture capital (VC) ownership; ln(mkcap); debt/ta; R&D/sales; VC reputation; age; foreign; CEO/founder; lockup; active CEO/Director	GMM; 2SLS; 3SLS	High levels of VC ownership and its reputation has a better corporate governance; Positive relationship between corporate governance characteristics and performance.
<b><i>Panel B: commercial corporate governance index provided by specialised companies</i></b>							
Gillan <i>et al.</i> (2003)	S&P 1;500 companies; and other large; publicly-traded corporations; 1997 to 2000	Investor Responsibility Research Centre	Sub indices: board of directors; corporate charter provisions; state of incorporation and ownership	TQ	Capital expenditure; total assets ; leverage; total pay; firm age; firm volatility	OLS	Industry does affect governance; test a reverse causation model in which TQ predicts governance for USfirms.

<i>Authors</i>	<i>Country</i>	<i>Source of Data</i>	<i>Corporate Governance Attributes</i>	<i>Performance Variables</i>	<i>Other Controls Variables</i>	<i>Method</i>	<i>Comment</i>
Gompers <i>et al.</i> (2003)	US 1990-1999	Investor Responsibility Research Centre	Index	Performance measure calculated using RMRF; SMB; HML; Momentum; and a constant		Four-factor regressions model of Carhart [1997]; Fama-MacBeth Return Regressions	Index is negatively correlated with firm value; as measured by TQ and shareholders' return.
Brown and Caylor (2004)	US 2,327 companies at February 1; 2003	Institutional Shareholder Services	52 firm CG characteristics and provisions to assign a score to each firm	ROE; profit margin and sales growth; TQ; Dividend yield; Stock Repurchase	Log(Assets); log (Age); dummy S&P dummy Delaware		High score associated with better governance have higher operating performance; higher valuations; and pay out more cash to their shareholders; negative relationship between governance index and sales growth.
Klapper and Love (2004)	374 companies 14 emerging markets	Credit Lyonnais Securities Asia	Composite of 57 qualitative; binary questions	TQ; ROA	Log(Sales); Growth; Legal System; ADRs; Industry dummies; fixed capital/sales	OLS	Better corporate governance is highly correlated with firm performance and market value.
Durnev and Kim (2005)	494 companies 24 countries 2000	Credit Lyonnais Securities Asia; Standard and Poor's disclosure data	Corporate Governance scores	Firm valuation - TQ	Investment opportunities; external finance; ownership concentration; legal environment; control for industry and company characteristics	Cross section random effects regression; 3SLS	Companies with higher quality corporate governance are valued higher. Conclude that companies with better investment opportunities and higher needs for external finance practice better governance and

<i>Authors</i>	<i>Country</i>	<i>Source of Data</i>	<i>Corporate Governance Attributes</i>	<i>Performance Variables</i>	<i>Other Controls Variables</i>	<i>Method</i>	<i>Comment</i>
							disclosure.
Bebchuk <i>et al.</i> (2009)	USA; 1990-2002	Investor Responsibility Research Centre	Uses a 6 provision index- to create an 'entrenchment index' four provisions that limit shareholder rights and two that make potential hostile takeovers difficult.	TQ	Log(Assets); Log(Age); Delaware incorporation; Insider Ownership; ROA; CAPEX; Leverage; R&D year & firm fixed-effects	Pooled; OLS	High Score is associated with weak shareholders' right; lower TQ and lower abnormal return; and a low score is associated with strong shareholder rights.
Ertugrul and Hegde (2009)		The Corporate Library (TCL); Institutional shareholder services and Governance Metrics International	Corporate governance rating	Operating income after depreciation scaled by total assets	Natural log (size); industry and year dummies	Fama and French (1995) three factors; momentum factor of Carhart (1997)	Commercial governance ratings perform poorly in predicting operating performance; stock returns; several TCL sub-ratings exhibit significantly predictive power with respect to company performance.
Carter <i>et al.</i> (2010)	USA S&P 500 1998 to2002	Investor Responsibility Research Centre	Includes minority and gender board characteristics	TQ; ROA	Log(assets); firm fixed-effects; year fixed-effects	OLS; 3SLS	No evidence of causation going from board diversity to financial performance; some evidence of positive relationship with board diversity and financial performance in the fixed effect regression.

<i>Authors</i>	<i>Country</i>	<i>Source of Data</i>	<i>Corporate Governance Attributes</i>	<i>Performance Variables</i>	<i>Other Controls Variables</i>	<i>Method</i>	<i>Comment</i>
Renders <i>et al.</i> (2010)	14 European countries for the period 1999-2003	Deminor Rating	The ratings based on over 300 criteria	ROA; ROE TQ market to sales market to book ratio	Log(market value of equity) log (age);growth; Leverage; ownership; fixed asset ratio; indicator of negative net income; IAS; shareholder protection	OLS; 3SLS	Corporate-governance ratings and performance has become weaker over time.
Vintila and Gherghina (2012)	USA 126 companies	Institutional Shareholder Services	Corporate governance sub-indices provided by ISS; construct own score for corporate governance	Return on asset; return on equity; Tobin'sQ; price earnings ratio; market to book ratio	Log(assets); leverage	OLS	Negative relationship between CGI and firm performance measured through TQ; price to book value; and price-earnings ratio. With ROA have not identified any relationship between CGI and ROA.

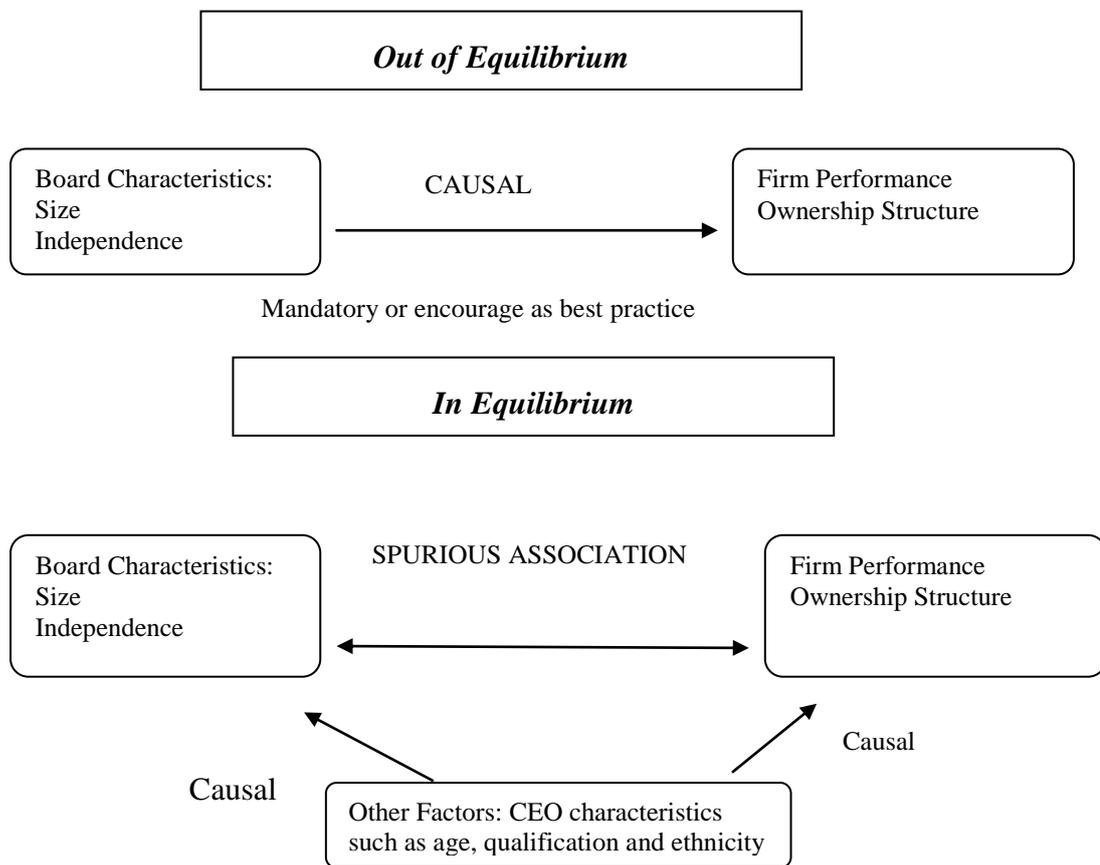
Gompers *et al.* (2003) uses a broad index based on twenty four provisions, find that the corporate governance index for a large sample of US companies negatively correlates to Tobin's Q. Durnev and Kim (2005) confirm the existence of a relationship between company-level governance attributes and firm value in a cross-section of countries. Doidge *et al.* (2007) show that the country characteristics account for a large part of the variation in company level governance across countries because it is costly for companies to adhere to stricter governance standards than those imposed by the country. While the results of these papers do not necessarily contradict each other, they do raise the question: is it mostly company level or country level characteristics that determine governance?

Brown and Caylor (2004) create a more extensive governance index compared to that of Gompers *et al.* (2003) and Bebchuk *et al.* (2009). Their data consists of 2,327 US companies with 51 equally weighted factors across eight subcategories based on data provided by the ISS. Their findings show that companies with high governance score have higher operating profit, higher valuations and pay more cash to their shareholders compared to companies with low governance score. While Black *et al.* (2006), using corporate governance index for Korean public companies find that corporate governance is an important factor in explaining the market value. Black *et al.* (2006) use a unique Korean governance rule that apply to firms with assets of at least 2 trillion won as an instrumental variable for their corporate governance index. This study and others, support company level corporate governance, in particular for countries with weak legal protection rights for investors (discussed in Chapter 5). Indeed, Black (2001) argues that higher governance practices on company performance are likely to be found in developing countries because these countries have weaker rules and large variations between companies in corporate governance practices.

Bebchuk *et al.* (2009) built an 'entrenchment index' based on the six provisions of Gompers *et al.* (2003). Examining the relationship between the entrenchment index and company performance, measured as Tobin's Q and stock return, Bebchuk *et al.* (2009) support the positive correlation between governance and performance found in Gompers *et al.* (2003)'s study.

The development of the commercially available governance index has been the stimulus for academic governance indices. However, according to Baker and Anderson (2010) the academic literature have not been able to establish a causal relationship between governance and performance. In contrast to the works of Gompers *et al.* (2003), Brown and Caylor (2004) and Bebchuk *et al.* (2009) described above, which show a positive relationship between the governance index and performance, the correlations are out of equilibrium as shown in Figure 8.2. In addition, studies such as Cremers and Nair (2005) question whether a positive association even exists.

**Figure 8.2: Equilibrium and Out of Equilibrium Determinants of Governance**



Source: adapted from Hermalin and Weisbach (2003, 8)

Hermalin and Weisbach (2003) state that empirical research on boards of directors is challenging because of the endogeneity and equilibrium nature of the variables (see Figure 8.2), for example, the company performance is both a function

of the previous directors' actions as well as that of the subsequent directors' choices. Studies that are more recent no longer ignore the endogeneity issue, but the complexity involved makes it difficult to judge the appropriateness of the results. The association between the numbers of board committees with company profitability has a negative association. The 'out of equilibrium' scenario 'suggests that restriction on the numbers of board committees should be encouraged or even mandated. The equilibrium interpretation suggests that there are other factors associated with board committees and company profitability, and hence strict regulation would be considered to be irrelevant and perhaps a hindrance to company development. Figure 8.2 illustrates both of the above two interpretations. Black *et al.* (2006, 371) study long-term relationship between governance and firm market value and are indifferent to equilibrium or out of equilibrium relationships.

Work by Cremers and Nair (2005) and Core *et al.* (2006), questions whether a positive association exists. For example, Daines *et al.* (2010) find no relationship between the commercial ratings and the company performance measures. Prior literature, besides using a composite measure of the corporate governance index, also considers individual board characteristics as important determinants of corporate governance. The studies that have a focus on a single measure of corporate governance include board independence (Hermalin and Weisbach 2003), share ownership and the duality of the CEO and Chairman roles (see Desender *et al.* 2013). An important question arises as to whether a single board characteristic can be as effective a measure of corporate governance compared to an index that has multiple characteristics associated with corporate governance, as cited in Bebchuk *et al.* (2009).

The principal differences between this chapter and the research discussed above are as follows: first, the thesis exploits a unique second-tier stock market in the UK, where the governance in the UK is characterised as having strong investor protection rights and applies a principle based concept. In contrast, most of the research consists of large public firms. Secondly, the CGScore is comprised of six subindices, for board committees, board independence, board power, board transparency and two indices for remuneration. Thirdly, over time AIM companies'

data has been more readily available and thus allowing to employ more control variables.

This study uses a sample set from the AIM companies and is similar to the two studies by Mallin and Ow-Yong (2012); Farag *et al.* (2014) who also derive their sample from the AIM. This study uses the Combined Code to develop the disclosure index, whereas the studies by Mallin and Ow-Yong (2012); Farag *et al.* (2014), both use the Quoted Companies Alliance Guideline to develop the corporate governance disclosure score. There are several differences between this study and the Mallin and Ow-Yong (2012) study. For example, this study explores the relationship between corporate governance disclosure index and company performance, including company and ownership shareholdings, whereas the Mallin and OW-Yong study examines the relationship between corporate governance and company and ownership characteristics. In addition, this study uses a sample set of 56 AIM companies for the period 2008 to 2009, whereas the Mallin and Ow-Yong (2012) study uses 300 companies quoted on the AIM prior to June 2006. This study is different to that by Farag *et al.* (2014) in their research design as they consider the relationship between corporate governance, venture capital ownership and company performance for the period 2000-2007 (see Table 8.1). In addition, they use the Generalised Methods of Moments and 3SLS to address causality issues.

## **8.6: Sample Selection**

The total number of companies listed on the AIM at the end of December 2008 was 1,681. Of this list, 436 companies that had listed on the AIM after the 1 January 2007 were deleted; 92 companies with zero market value were deleted, leaving a sampling frame of 1,153 companies. From the 1,153 companies, I select one of the first 10 companies in alphabetical order; I then further select every 10<sup>th</sup> company until a random sample of 82 companies was obtained. At this point, no sector or minimum size of the company is deleted, and, therefore, the final sample may include financial companies as well as some of the smallest companies by market capitalisation on the AIM. A further 17 companies were deleted for the following reasons: access to either the company's annual report or corporate

governance information is unavailable on the company's website or internet; delisting of the company from AIM; cancellation of the shares of the companies; the company was a cash shell or had no sales revenue. A further nine companies were removed as TQ was greater than 13. As previously explained in Chapter 7, one of the reasons is that some AIM companies in the sample had extremely high values, which would significantly influence results for empirical analysis without representing the general patterns. In the final sample, 56 companies remained in 2008 and 3 further companies dropped out in 2009 owing to missing data, leaving 53 companies in 2009. The three companies for which CGScore was not available are Genetix Group (proposed cancellation of shares)<sup>62</sup>, Thirdforce (request of the company the shares were cancelled)<sup>63</sup> and Touch Group (annual report for 2009 not available; company delisted from the AIM in December 2011). The above sample selection ensured a spread of the full range of market values of the companies and, therefore, size bias was minimised. Although not used in the regressions, two companies were dual listed, and only one company had a female on the board of directors.

## **8.7: Variables**

### **Corporate Governance Variables**

#### ***Construction of the Corporate Governance Index (CGScore)***

Corporate Governance Index (CGScore) is a composite measure using five thematic groups consisting of board committees, board independence, board power, board transparency and board remuneration. For details on the construction of the CGScore, see Table 8.2. The corporate governance data used in this study is for a two-year period 2008 to 2009. This chapter uses the content analysis approach to identify the corporate governance provisions identified on companies' annual reports, and or websites. The rationale for using this approach is for two reasons. First, it allows searching directly from the company's annual report or websites for adoption of the corporate governance recommendations communicated to

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<sup>62</sup> <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ag09Eqn.uwU0>, accessed 19 September 2014

<sup>63</sup> <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=a4ZnzFmlX6nw>, accessed 19 September 2014

stakeholders. Second, it allows coverage of a larger sample of companies, which would be difficult by using other methods such as interviews. The study in this chapter has considered prior literature, in particular, Haniffa and Cooke (2002); Bruno and Claessens (2007); Mallin and Ow-Yong (2012); Farag *et al.* (2014). In addition, taking into account the practicalities of the AIM and the Combined Code (2008) as a benchmark, as this was corporate governance code available for the two-year periods of analysis. The researcher use of Combined Code for the construction of the CGScore is for two reasons: first, Cadbury Report (1992) in section 3.15 suggests that full compliance will bring benefits to the boards of small companies; second as QCA guidelines are adopted from the UK Corporate Governance Code as

*'The QCA Code adopts key elements of the UK Corporate Governance Code, current policy initiatives and other relevant guidance and then applies these to the needs and particular circumstances of small and mid-size quoted companies on a public market'.<sup>64</sup>*

The literature articles allowed the development of a list of governance items as a thematic disclosure index, across five major areas, to examine the extent to which AIM companies report corporate governance information.

Following from Wiseman (1982), corporate governance attributes were dichotomous, but there were some attributes where a degree of specificity was necessary. For example, remuneration of the directors needs to be broken down into a number of sub-elements, which were base salary, bonus, long-term share options, share options, pension and other items. For each item of remuneration disclosed a score of one was given, resulting in a total score of five, to reflect the different types of remunerations. There were difficulties as to when only aggregate figures for all directors are available.

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<sup>64</sup> <http://www.theqca.com/shop/guides/86557/corporate-governance-code-for-small-and-midsize-quoted-companies-2013-downloadable-pdf.shtml>

The approach to scoring items is mainly binary in that an item in the research theme scores one if disclosed and zero if it is not. The calculation of the disclosure scores is as follows: first, I allocate a score of '1' to the company if the annual report or website contains a specific recommendation or information, or '0' if not. Second, individual scores for each thematic group are then aggregated into a total index, and finally a summative score for each company was noted, therefore, summarising the overall governance into a single number (see Table 8.2). The final list of corporate governance disclosure items contains an unweighted score. The CGScore calculation using the number of governance attributes disclosed by the company ranges from a minimum of zero to a maximum of twenty. Table 8.2 shows the details for the construction of the corporate governance score.

To ensure that the information to construct the CGScore had no errors as the data is manually collected by the author, therefore, the following crosschecks for the disclosure scores were used. The company's annual reports/websites were visited on the following dates: March 2010, August 2010 and September 2010. The resulting corporate governance disclosure scores for each company from the first and second checks coincided exactly with those calculated.

**Table 8.2: Construction of the Corporate Governance Score**

Variable	Description	Source of information	Attributes	Binar	Maximu
Board Committee Index (BODC1)	Section A.1.2 of the Combined Code (1998) stresses the importance of the committees as a corporate governance best practice. The main committees are audit, remuneration and nomination. I assign one point per committees and one point for any additional committee(s). QCA Guidelines (s5)	Corporate governance section of the annual reports Company's website	Audit Remuneration Nomination Other	1, 0 1, 0 1, 0 1, 0	4
Board Independence (BODI2)	The Combined Code also advocates for independence of the committee members. In line with the Combined Code, the second index BODI 2 suggests if there is the presence of strict independence in each of the three main committees. QCA Guidelines Appendix A- at least two non-executive plus chairmans are independent	Corporate governance's report or biography on the board of directors. Assumed that if the annual report states non-executive director' as a committee member then this suggests independence	Audit Remuneration Nomination	1, 0 1, 0 1, 0	3
Board Power (BODP3)	One of Cadbury's repeated arguments for the separation of Chairman and Chief Executive Officer (CEO) is to ensure that the board runs properly and power is not concentrated in one individual, positing that agency problems are higher when the same person holds both positions. QCA Guidelines: Best practice is that the chairman is not also the CEO	Corporate governance section Information on the board of directors	Chairman and Chief Executive Office roles are held by two individuals Chairman is non-executive	1, 0 1, 0	2
Board Transparency (BODT4)	Consists of three separate areas: auditor's remuneration, related party transaction and member of the board with financial knowledge. The emphasis originated from the Smith guidance to non-audit services: 'The audit committee should develop and recommend to the board the company's policy in relation to the provision of non-audit services by the auditor. The audit committee's objective should be to ensure that the provision of such services does not impair the external auditor's independence or objectivity.'	Audit fees information: Corporate governance report under audit committee Notes to the financial statements Notes to the financial statements The directors' report Notes to the financial statements	Audit fees greater than non-audit fees Disclosure of non-audit fees as zero If any director had no related party transactions	1, 0 1, 0 1, 0	4

Variable	Description	Source of information	Attributes	Binar	Maximu
	QCA guidelines: audit committee responsibility for agreeing scope of the audit, non audit service policy and the fees charged by the auditor; no information on related party transaction; and requires one member of the committee to have recent and relevant financial experience	Directors' information: The company's website Annual reports	member of board with financial knowledge	1, 0	
Directors' remuneration structure (REM1)	Remuneration of executive directors - components of the remuneration package commonly contain base salary, bonus, long term share based incentives, pension and other benefit. The disclosure of each component is given a score of one, and non-disclosure a score of zero. Where breakdown of the individual remuneration package was not given and only aggregate figures shown a score of zero was given, as it lacks transparency QCA guidelines: comments on remuneration policy but not in detail	Remuneration report within the annual report Aggregate figures were available in the notes to the financial statements.	Base salary Bonus Long term share based incentives Pension Other benefits	1, 0 1, 0 1, 0 1, 0 1, 0	5
Directors' remuneration as options (REM2)	Are options available to the directors and the non-executive directors?	Remuneration report within the annual report Aggregate figures available in the notes to the financial statements.	Options outstanding for directors NEDs have options	1, 0 1, 0	2
<b>Maximum available score</b>					<b>20</b>

## **Company Performance Variables**

The performance measures based on prior literature are Tobin's Q (TQ). For robustness checks, return on assets (ROA), and market to book value (MBV) are used (for a description of the variables see Chapter 7). The prediction is a positive relationship between corporate governance measure and company performance.

## **Ownership Variables**

The ownership shareholdings are measured using director ownership, institutional ownership and the largest shareholdings. For a description of the variables, see Chapter 7.

## **Control Variables**

The control variables are sales growth; company size (measured as logarithm of total assets), and capital expenditure over sales. The expectation is that larger companies will adopt better corporate governance and disclose more information. Higher growth firms have greater information asymmetry and agency costs and hence growth companies will have poorer corporate governance disclosures. Higher capital expenditure will need higher finance, from either financial intermediaries or equity shareholders. In such cases, managers will commit to providing more voluntary information and improve the company's governance structure.

In previous research, company size has been found to be positively correlated with disclosure level in a number of studies and statistically significant. This suggests that larger companies disclose more information, either mandatory or voluntary, than smaller companies do (Meek *et al.* 1995; Camfferman and Cooke 2002; Mallin and Ow-Yong 2012; Allegrini and Greco 2013).

Listing on another stock exchange status is also used as a control variable in studies using corporate governance index (Allegrini and Greco 2013). Two companies in the sample were dual listed; the number was too small to justify the use of this variable in this thesis. Table 8.3 reports the definitions and measurement of all variables in this chapter.

**Table 8.3: Variable Definitions**

<i>Variable</i>	<i>Definition</i>	<i>Measurement</i>
CGScore	Corporate Governance Score	See Table 8.2 for building the CGSCORE
TQ	Tobin's Q	The sum of the market capitalisation less shareholders' equity plus total assets divided by book value of the total assets
TQ_1	Lagged Tobin's Q	For the previous year - TQ
ROA	Accounting profitability	Earnings before interest and taxation divided by total assets
ROA_1	Lagged Accounting profitability	For the previous year - ROA
MBV	Market to book value	Market capitalisation divided by the book value of the shareholders' equity
LOG(SALES)	Company size	Natural logarithm of sales
SALES,		£Million
TA		Book value of total assets, £Million
LOG(TA)	Company size	Natural logarithm of total assets
GROWTH	Sales growth	Difference between the current and previous year sales divided by the previous year sales
PPE/S	Capital expenditure	Property, plant and equipment divided by sales
DUMMYCEO	Duality roles of CEO/Chair	Binary number: 1 if the roles are separate, otherwise 0
DIR_OWNP	Director Ownership	Percentage of shares owned by the managers/directors on the board
INST_OWNP	Institutional Ownership	Percentage of shares owned by the institutions
LA	Largest Shareholder	Percentage of shares owned by the largest shareholder

## 8.8: Hypothesis

This section examines the impact of the relationship between voluntary disclosure of corporate governance practices, the company performance and the ownership shareholdings. This chapter uses a composite measure of governance index, rather than a single variable, to measure the overall quality of corporate governance. Table 8.1 shows that this is a common method of choice in the corporate governance literature. The index is constructed using the Bruno and Claessens

(2007) paper. The details of the corporate governance index (CGScore) are available in Table 8.2. CGScore is designed to estimate the amount and details of voluntary information that improves corporate governance information for the investors and comply with the QCA recommendations of good practice. The following sections discuss the development of the hypotheses relating to the CGScore as the governance variable and explanatory variables for performance and ownership. The higher instances of voluntary disclosure and adoption of corporate governance best practices by the company suggests a higher quality of corporate governance practices of that company. Thus, for investors to purchase shares in the company and hold them would require high quality of corporate governance practices and correspondingly higher company performance.

Although the prior literature shows mixed results for association between the corporate governance and profitability, however, following Klapper and Love (2003) who find that companies with better corporate governance have higher operating performance. Therefore, to find out how corporate governance behaves in relation to corporate performance, the expectation is that higher corporate governance adoption will increase with corporate performance. Hence, the expectation is that a positive relationship between the two variables.

***H1: Companies with higher corporate governance index are more likely to have higher corporate performance.***

Director ownership is the percentage of shares held by members of the board. With low director ownership holdings, the potential of an agency problem increases. Therefore, the shareholders will increase monitoring of managers' behaviour to mitigate the agency problem. Since monitoring increases costs, better corporate governance practices would reduce such costs: hence, the prediction is that we expect an association with higher corporate governance score with lower share ownership. Managers will tend to adopt better governance practices to avoid monitoring by outside shareholder. Here adoption of better corporate governance can be a substitute for higher monitoring which can add costs for the company. With respect to AIM companies, large shareholders (institutional or individuals) can

address the agency problems resulting from the separation of ownership and control. Even controlling or larger shareholders, however, may rely on boards of directors, to monitor and discipline management. The regression includes ownership concentration, and ownership concentration squared to account for possible non-linearity between corporate governance and ownership concentration. For robustness, institutional shareholdings and the largest shareholding are also explanatory factors.

***H2: Companies with higher corporate governance index are more likely to have lower percentage of director share ownership.***

In the hypothesis 1, corporate governance is the dependent variable and corporate performance is the independent variable. Are the two variables causally related; that is, whether corporate performance the cause and corporate governance the effect? According to Gujarati and Porter (2010, 8) using regression analysis cannot establish causation. However, the analysis needs to consider reverse causality. In addition, following other researchers who use company performance as the dependent variable and corporate governance index, for example, (Klein *et al.* 2005), the third hypothesis predicts that the performance is positively associated with the corporate governance index.

***H3: Companies with higher company performance, are more likely to have a higher quality of corporate governance disclosures, i.e. have a higher corporate governance score***

## **8.9: Results and Analysis**

The analysis involves the ordinary least squares (OLS) regression to examine the relationship between CGScore and the explanatory variables. The primary interest is the relationship between corporate governance index and the company performance. Hence, TQ is regressed on the corporate governance index and other control variables. Following Black *et al.* (2003); Klein *et al.* (2005), this study includes as control measures company size, sales growth, capital expenditure and the

DUMMYCEO. The variables were described in Chapter 7, section 8.7 and the definitions are available in Table 8.3.

This chapter uses the following regression equations:

**Equation 8.1**

$$CGSCORE = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 GROWTH + \beta_4 PPE/S + \beta_5 DUMMYCEO + \varepsilon \quad (1)$$

**Equation 8.2**

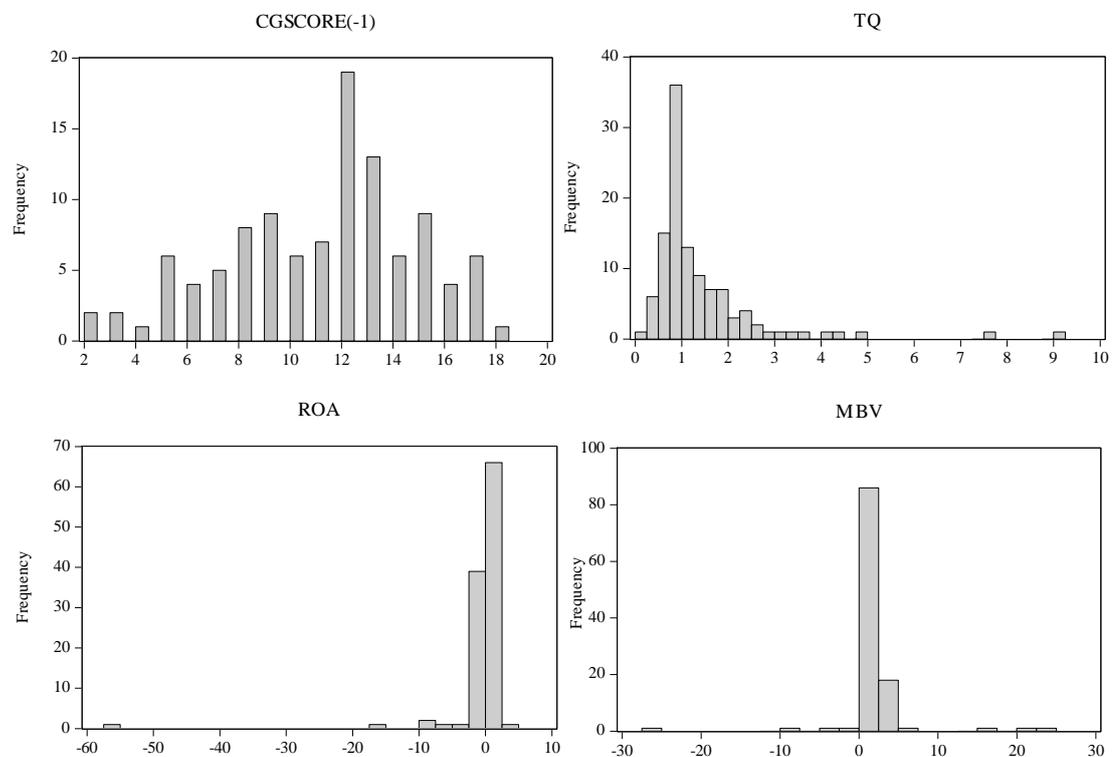
$$CGSCORE = \alpha_0 + \beta_1 DIR\_OWNP + \beta_2 DIR\_OWNP^2 + \beta_3 LOG(TA) + \beta_4 GROWTH + \beta_5 PPE / S + \beta_6 DUMMYCEO + \varepsilon \quad (2)$$

**Equation 8.3**

$$TQ = \alpha_0 + \beta_1 CGSCORE + \beta_2 LOG(TA) + \beta_3 GROWTH + \beta_4 PPE / S + \beta_5 DUMMYCEO + \varepsilon \quad (3)$$

The histograms in Figure 8.3 illustrate that both ROA and TQ are skewed but in opposite directions. CGScore suggests that there is variation in the adoption and disclosure of the corporate governance components of the index constructed. As for TQ, large number of companies has TQ less than 1.

**Figure 8.3: Histogram of CGScore and Company Performance**



**Constituents of the CGScore and descriptive statistics:**

Table 8.3 shows the descriptive statistics of each of the governance items and the percentage of incidence. For the BODC1 (see Table 8.3) indicator, it shows that for companies in 2009 have an audit committee 91% (93%) and remuneration committee 89% (91%) and Nomination committee is only observed by 28.3% (28.6%) of companies (figures in bracket relates to 2008). The incidence of 'other committees' is low increasing from 11% to 19%. The difference over the two years is very little in each of the three main committees. Bruno and Claessens (2007) find the adopted practice for the presence of an audit committee is 83%, remuneration committee is 58% and a nomination committee is 52%.

Table 8.4 shows that independence characteristics, BODI2, of the three main board committees was slightly higher in 2008 compared to 2009. The audit and nomination committees have a majority of independent board members.

Table 8.4 also shows that board power, BODP3, 86% of the companies have two individuals for the roles of the CEO and Chairman in 2008, and this figure drops to 79% for the year 2009. The reduction over the two year may due to several reasons, for example, companies' preference for an internal chairman, this maybe a transition period, or the company genuinely believes that the same individual may do a better job. However, the incidence of the chairman as a non-executive director is 57.1% in 2008 and increases to 62.3% in 2009.

Table 8.4 shows that for all the three attributes used to characterise transparency, BODT4, is higher in 2009, that is, more companies are disclosing and adopting greater transparency. The range of corporate disclosure score varies from company to company but remains similar over the two years

Table 8.4 shows the remuneration package, and in 2008, 70% of the companies have a base salary, which increases to 74% in 2009. Bonuses and long-term share based incentives (LTSB) have dropped slightly from 2008 to 2009. However, the pensions and other benefits have increased. Table 8.4 also shows that 71.4% of the executive directors have share options in 2008, which increased to

77.4% in 2009. Non-executive options increase from 25% to 30% over the two-year period.

**Table 8.4: Attributes in Developing the Corporate Governance Score**

Attributes	2008 – 56 Companies			2009 – 53 Companies		
	Number	Average Score	Maximum	Number	Average Score	Maximum
<b>Board Committees (BODC1)</b>						
Audit	52	0.93	1	48	0.91	1
Remuneration	51	0.91	1	47	0.89	1
Nomination	16	0.29	1	15	0.28	1
Other	6	0.11	1	10	0.19	1
		2.24	4		2.27	4
<b>Board Committee Independence (BODI2)</b>						
Audit	40	0.71	1	37	0.70	1
Remuneration	39	0.70	1	36	0.68	1
Nomination	10	0.18	1	9	0.17	1
		1.59	3		1.55	3
<b>Board Power (BODP3)</b>						
CEO/Chairman roles are	48	0.86	1	42	0.79	1
Non-executive chairman	32	0.57	1	33	0.62	1
		1.23	2		1.41	2
<b>Board Transparency (BODT4)</b>						
Audit Fees vs non-audit	43	0.77	1	48	0.91	1
Related Party	23	0.41	1	26	0.49	1
Director with Finance Knowledge	35	0.63	1	43	0.81	1
		1.81	4		2.21	4
<b>Directors' remuneration (REM1)</b>						
Base Salary	39	0.70	1	39	0.74	1
Bonus	25	0.45	1	23	0.43	1
LTBS	27	0.48	1	25	0.47	1
Pensions	29	0.52	1	30	0.57	1
Other Benefits	28	0.50	1	30	0.57	1
		2.65	5		2.78	5
<b>Directors' Options (REM2)</b>						
Executive Options	40	0.71	1	41	0.77	1
NEDs Options	14	0.25	1	16	0.30	1
		0.96	2		1.07	2
<b>Maximum Score</b>						<b>20</b>

*Source: companies' annual reports and websites*

Table 8.5 presents the descriptive statistics for the variables used in Chapter 8. The corporate disclosure score varies from a high of 18 to low of 2 and is widely distributed (see Table 8.5). TQ is skewed with a mean of 1.41 and a maximum of 9.16 (see Table 8.5).

**Table 8.5: Descriptive Statistics of the Variables**

	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
CGScore	10.96	12.00	18.00	2.00	3.71	109
TQ	1.41	0.98	9.16	0.18	1.27	112
TQ_1	2.06	1.22	23.11	0.13	3.04	112
ROA	-0.81	0.04	3.30	-55.89	5.60	112
ROA_1	-3.63	0.04	3.88	-350.27	33.30	112
MBV	1.48	0.89	22.60	-25.88	4.30	112
LOG(SALES)	2.82	2.71	6.09	-1.97	1.66	111
SALES	53.98	15.08	439.30	0.14	90.41	111
TA	125.45	23.85	2178.09	1.62	346.78	112
LOG(TA)	3.44	3.17	7.69	0.48	1.48	112
GROWTH	0.15	0.06	10.48	-15.27	1.98	109
PPE/S	1.07	0.09	22.45	0.00	3.24	109
DUMMYCEO	0.83	1	1.00	0.00	0.38	109
DIR_OWNP	24.69	20.00	72.78	3.23	18.58	64
INST_OWNP	33.25	28.62	96.02	4.05	22.54	79
LARGEST(LA)	24.66	17.79	76.08	4.28	18.71	83

Table 8.6 presents the correlation between the variables. Table 8.6 shows a positive correlation between CGScore and TQ, ROA, MBV and DUMMYCEO. Table 8.6 shows a negative correlation between CGScore and LOG (TA), growth, and capital expenditure. CGScore shows a positive correlation with dir\_ownp, inst\_ownp and the largest shareholder. The univariate analysis supports the hypothesis, H1, that CGScore has a positive association with company performance.

**Table 8.6: Correlation Analysis**

**Sample size 112 observation for the period 2008 to 2009**

	CGScore	TQ	TQ_1	ROA	ROA_1	MBV	LOG(SALES)	SALES	TA	LOG(TA)	GROWTH	PPES	DUMMYCEO	DIR_OWNP	INST_OWNP	(LA)
CGScore	1.00															
TQ	0.13	1.00														
TQ_1	0.03	0.42	1.00													
ROA	0.16	-0.07	0.05	1.00												
ROA_1	0.07	-0.46	-0.65	0.06	1.00											
MBV	0.14	0.24	-0.03	-0.00	0.21	1.00										
LOG(SALES)	-0.03	-0.08	-0.05	0.13	0.12	-0.01	1.00									
SALES	0.08	-0.12	0.01	0.09	0.07	-0.06	0.75	1.00								
TA	-0.13	-0.13	0.05	0.05	0.04	-0.06	0.38	0.53	1.00							
LOG(TA)	-0.03	-0.22	-0.15	0.18	0.21	-0.05	0.55	0.59	0.70	1.00						
GROWTH	-0.09	0.08	-0.19	0.02	0.00	0.04	-0.15	-0.34	-0.30	-0.14	1.00					
PPE/S	-0.13	-0.14	-0.08	0.03	0.03	-0.05	-0.20	-0.12	-0.01	0.15	0.02	1.00				
DUMMYCEO	0.41	0.04	-0.07	-0.03	0.20	0.01	-0.06	-0.16	-0.30	-0.26	-0.09	-0.29	1.00			
DIR_OWNP	0.28	0.02	-0.05	0.16	-0.01	0.03	0.14	0.03	-0.16	-0.16	0.02	-0.11	0.29	1.00		
INST_OWNP	0.22	-0.01	0.05	-0.08	0.02	-0.03	-0.35	-0.19	-0.16	-0.28	0.10	0.05	0.09	-0.44	1.00	
LARGEST (LA)	0.13	0.07	0.02	0.16	-0.01	-0.02	-0.16	-0.06	-0.21	-0.30	0.01	0.01	0.08	0.72	0.42	1.00

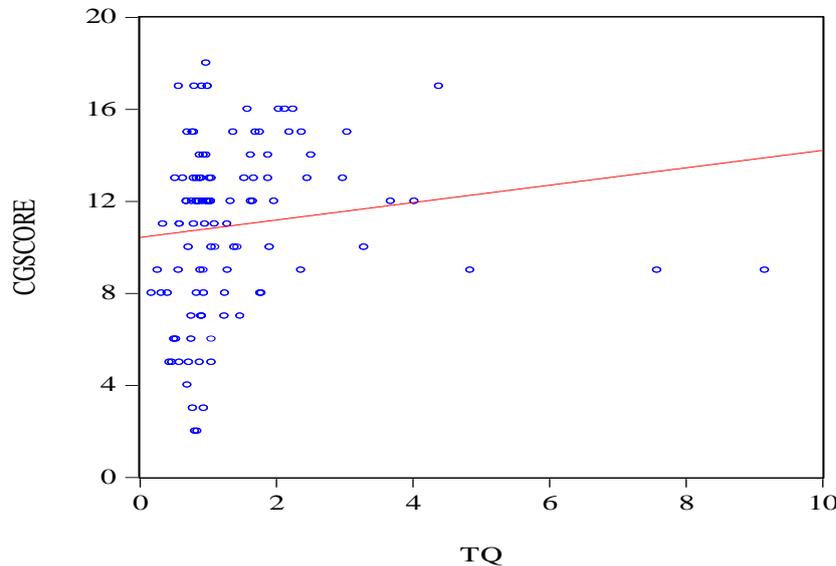
**Table 8.7: Expected Signs**

<i>Hypothesis</i>	<i>Variables (expected sign)</i>
H1 – corporate governance score and company performance	TQ (+), ROA (-), MBV (+); Size (+); Growth (-), PPE/S (+); DUMMYCEO (+)
H2 – corporate governance score and ownership concentration	DIR_OWNP (-), INST_OWNP (+), LA(-)
H3 – company performance (TQ) and corporate governance score	CGScore (+); Size (+); Growth (+); PPE/S (+); DUMMYCEO (+)

**CGScore as the dependent variable - analysis of Equation 8.1**

Table 8.8 reports the results of Equation 8.1, using ordinary least squares regression. A qualitative chart, Figure 8.4 shows a scatter plot plus a fitted regression line from a regression of CGScore and TQ plus a constant term. The graph still shows some outliers, although the sample includes companies with TQ less than 13. The positive association is not statistically significant as  $t = 1.36$  (see Table 8.7).

**Figure 8.4: Corporate Governance Score and Tobin’s Q**



The next section shows the analysis of the regressions of CGScore against TQ. A small set of control variables, are added showing the selected results with a different set of control variables in regressions Models 1 to 4 and results with a full set of control variables in regression Model 5.

### ***Tobin's Q***

In Table 8.8, Model 1, CGScore is regressed on TQ as a sole explanatory variable. An increase of one point in the TQ causes an increase of 0.38 points in the CGScore. Models 2, 3, 4 and 5 include one additional control variable in the estimation. Model 5 includes all variables considered together. In each of the five models the positive sign of the coefficient remains, however, any association is statistically insignificant. All control variables, except DUMMYCEO, are statistically insignificant.

### ***Return on Assets (ROA)***

In Table 8.8, Panel B shows the regression of CGScore on the ROA, and the control variables. Model 1 includes the ROA as the sole explanatory variable. An increase of one point on ROA results in an increase of 0.38 points in CGScore, however, the result is statistically insignificant. Models, 2, 3, 4 and 5 include one additional control variable. In each of these models, ROA maintains the same positive sign and is statistically insignificant. All control variables, except DUMMYCEO are statistically insignificant.

### ***Market to Book Value (MBV)***

In Table 8.8, Panel C shows the regression of CGScore on the MBV, and the control variables. An increase of one point on MBV results in an increase of 0.12 points in CGScore. The results are similar to that of the TQ and ROA performance variables that is there is no statistical significance and the R-squared values are very low. These results contradict Farag *et al.* (2014) who find that using the governance equation, gives a positive and significant relationship ( $p < .01$ ) between the CGAIM50<sup>65</sup> index and financial performance measured by TQ, ROE and ROA.

### ***Control variables***

In Table 8.8, the variables LOG (TA), GROWTH, PPE/S the direction of the coefficients remain the same irrespective of the performance measure, but are not

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65 Farag *et al.* (2014) construct the CGAIM50 index to measure corporate governance characteristics consisting of 50 items. This index is equally weighted and each item has a binary code.

statistically significant. In contrast to the study by Farag *et al.* (2014), this study does not find any association between the CGScore and company size. With DUMMYCEO, the coefficient is positive (as predicted), statistically significant and increases the explanatory power. The positive coefficient for the DUMMYCEO is in keeping with the agency theory, which suggests that the two roles of CEO and Chair should be separate and, hence, therefore, influences higher governance disclosure. Haniffa and Hudaib (2006) find that there is no association between DummyCEO and Tobin's Q, but do find relationship when using ROA as the performance variable.

This study uses a small number of control variables, which raises the potential for omitted variables bias. It is possible that unobserved company heterogeneity will predict both governance and company performance, and leading to a spurious correlation between the two variables. Figure 8.4 shows that there are outliers and could consider dropping them from the sample. However, this would reduce the sample size and, therefore, not considered. Black *et al.* (2006, 479) drop the outliers for TQ, remaining with a revised sample of 495 companies from a sample of 515 companies, but do not find any difference in the results that include outliers. Company level financial characteristics as determinants of corporate governance practices do not explain well the deviations from better or poor adoption of corporate governance attributes (attributes shown in Table 8.2).

The amount of variability explained by the company characteristic varies from a low of 2% to a high of 19% suggesting that there are missing variables. The missing variables, for example, may be related to behaviour of the management, type of Nominated Adviser as a broker or non-broker, auditor from large or small firms.

**Table 8.8: OLS Results for CGScore on Performance**

$$CGSCORE = \alpha_0 + \beta_1 TQ_1 + \beta_2 LOG(TA) + \beta_3 GROWTH + \beta_4 PPES + \beta_5 DUMMYCEO + \varepsilon$$

**Equation 8.1**

AIM Companies

Models	Panel A: TQ					Panel B: ROA					Panel C: MBV				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
C	10.43 [19.85]**	10.44 [9.70]**	11.36 [10.03]**	11.41 [10.07]**	6.64 [4.31]**	11.03 [31.17]**	11.56 [12.55]**	12.39 [12.74]**	12.36 [12.74]**	7.86 [5.59]**	10.79 [28.91]**	10.98 [11.95]**	11.83 [12.06]**	11.82 [12.06]**	7.28 [5.12]**
TQ	0.38 [1.36]	0.38 [1.32]	0.33 [1.17]	0.30 [1.05]	0.38 [1.42]										
LOG(TA)		-0.00 [-0.00]	-0.20 [-0.78]	-0.7 [-0.64]	0.15 [0.61]		-0.15 [-0.62]	-0.34 [-1.36]	-0.30 [-1.16]	0.00 [0.01]		-0.05 [-0.23]	-0.25 [-0.98]	-0.20 [-0.79]	0.10 [0.41]
GROWTH			-0.20 [-1.13]	-0.20 [-1.08]	-0.10 [-0.59]			-0.20 [-1.14]	-0.20 [-1.09]	-0.10 [-0.59]			-0.20 [-1.12]	-0.19 [-1.07]	-0.10 [-0.58]
PPE/S				-0.12 [-1.06]	-0.00 [-0.01]				-0.13 [-1.19]	-0.02 [-0.18]				-0.13 [-1.14]	-0.01 [-0.13]
DummyCEO					4.08 [4.21]**					3.99 [4.17]**					4.00 [4.14]**
ROA						0.37 [1.73]	0.39 [1.81]	0.38 [1.73]	0.38 [1.74]	0.38 [1.89]					
MBV											0.12 [1.42]	0.11 [1.40]	0.10 [1.20]	0.09 [1.15]	0.10 [1.31]
Observations:	109	109	106	106	106	109	109	106	106	106	109	109	106	106	106
R-squared:	0.02	0.02	0.03	0.04	0.19	0.03	0.03	0.05	0.06	0.20	0.02	0.02	0.03	0.04	0.18
F-statistic:	1.86	0.92	1.13	1.13	4.60	2.98	1.68	1.69	1.62	4.98	2.02	1.03	1.15	1.19	4.53

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

## **Corporate Governance Score and Ownership: Non Linear Relationship - analysis of Equation 8.2**

In this section, Table 8.9 shows the results of the regression of the CGScore on ownership. The ownership variables include shareholdings of the director, the institutional investors and the largest shareholder (may be individual or an institutional). The square value of ownership enables to test for non-linearity. Table 8.9 shows three different models as robustness for Equation 8.2. Model 1 includes the control variables LOG (TA) and DUMMYCEO; Model 2 uses all the control variables as per Equation 8.2 and Model 3 uses DIR\_OWNP as the explanatory, and LOG (TA) and DUMMYCEO as the explanatory variables.

As per Durnev and Kim (2005); Bruno and Claessens (2010) the regressions do not use in the same equation the variables for performance and ownership. In Panel A (Model 1) the results show a weak association with CGScore, the coefficients on the variables DIR\_OWNP and  $\text{DIR\_OWNP}^2$  are statistically significant and have the expected sign, that is, the coefficients on the variables DIR\_OWNP and  $\text{DIR\_OWNP}^2$  are positive and negative respectively. The reversal of signs suggests that the corporate governance practices improve with an increase in director ownership but at a decreasing rate. Inclusion of the control variables GROWTH and PPE/S shows that the variable DIR\_OWNP is weakly significant, but  $\text{DIR\_OWNP}^2$  is not (Panel A, Model 2).

However, in Panel B, in Models 1 and 2, the institutional shareholder ownership gives a positive coefficient for both INST\_OWNP and  $\text{INST\_OWNP}^2$  and is statistically insignificant. This result is consistent with that found by Donnelly and Mulcahy (2008) who do not find any association between disclosure score and the institutional ownership holdings.

In Panel C (Model 1), the variables LA and  $\text{LA}^2$  give a stronger positive – negative association, however, for the squared term the coefficients are statistically significant but close to zero. The positive-negative association with the largest shareholder ownership is similar to the findings of Durnev and Kim (2005, 1478).

Nevertheless, contrasts the results of Black *et al.* (2006, 403) where they use the largest shareholder for Korean companies and find that it is statistically insignificant. The results in Panel A and C are consistent with the debate that the higher ownership concentration may align the interest of the directors with those of the minority shareholders, but may result in higher managerial entrenchment.

Model 3 does not include the squared form of the ownership variable on the right hand side of the equation. The results of Model 3 show that DIR\_OWNP and the LA ownership holdings remain positive but statistically insignificant and the coefficients are closer to zero. However, with the INST\_OWNP the coefficient is positive and statistically significant but weak.

For the control variables, there is no statistical significant relationship between CGScore and LOG (TA), GROWTH or PPE/S. As in Equation 8.1 (see Table 8.8), the control variable DUMMYCEO is positive and statistically significant. Unlike, other studies, although company size has a positive coefficient, but is not statistically significant to higher CGScore (see Eng and Mak 2008, 340; Farag *et al.* 2014).

**Table 8.9: CGScore and Ownership Shareholding Non-Linear Relationship**

$$CGSCORE = \alpha_0 + \beta_1 DIR\_OWNP + \beta_2 DIR\_OWNP^2 + \beta_3 LOG(TA) + \beta_4 DUMMYCEO + \beta_5 GROWTH + \beta_6 PPE / S + \varepsilon$$

**Equation 8.2**

Dep. Var: CGSCORE	PANEL A: DIR_OWNP			PANEL B: INST_OWNP			PANEL C: LARGEST		
	1	2	3	1	2	3	1	2	3
C	2.94 [1.91]	7.35 [4.18]**	4.47 [3.11]**	4.63 [2.58]*	9.50 [5.35]**	4.38 [2.70]**	3.20 [1.97]	7.29 [4.39]**	4.98 [3.26]**
DIR_OWNP	0.20 [2.61]*	0.24 [2.55]*	0.03 [1.45]						
DIR_OWNP <sup>2</sup>	-0.00 [-2.27]*	-0.00 [-1.68]							
LOG(TA)	0.32 [1.25]	-0.04 [-0.14]	0.34 [1.30]	0.41 [1.49]	0.06 [0.20]	0.39 [1.46]	0.29 [1.17]	-0.09 [-0.32]	0.35 [1.36]
DUMMYCEO	4.31 [3.96]**		4.70 [4.23]**	4.57 [4.72]**		4.57 [4.75]**	4.29 [4.61]**		4.80 [5.08]**
GROWTH		-0.26 [-1.24]			-0.24 [-1.27]			-0.24 [-1.33]	
PPE/S		-0.43 [-1.14]			-0.14 [-1.17]			-0.18 [-1.66]	
INST_OWNP				0.02 [0.26]	0.03 [0.40]	0.04 [2.16]*			
INST_OWNP <sup>2</sup>				0.00 [0.34]	0.00 [0.17]				
LARGEST(LA)							0.23 [2.92]**	0.31 [3.59]**	0.03 [1.32]
LARGEST <sup>2</sup> (LA <sup>2</sup> )							-0.00 [-2.65]**	0.00 [-3.21]**	
Observations:	63	60	63	79	79	79	82	79	82
R-squared:	0.37	0.26	0.31	0.27	0.09	0.27	0.32	0.19	0.26
F-statistic:	8.34	3.73	8.77	6.90	1.40	9.28	9.24	3.46	9.26

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

### **Company Performance as the dependent variable – analysis of Equation 8.3**

Table 8.10, shows the results of the regression of performance variables on CGScore and control variables.

In Table 8.10, Model 1, TQ is regressed on CGScore as a sole explanatory variable. An increase of one point in the CGScore causes an increase of 5% in TQ. The regression estimations for Model 2, Model 3 and Model 4 include one additional control variable. Model 5 includes all variables considered together. The regression is repeated with ROA and MBV as dependent variables.

In all five models, the regression of TQ on CGScore gives a positive coefficient, though the result is statistically insignificant. Adding control variables has relatively no effect on the CGScore coefficient. LOG (TA) has a negative coefficient and is statistically significant in Models two to five. The direction of the coefficient and statistical significance for the company size is consistent with other research (see, for example, Black *et al.* 2006). GROWTH has a positive sign but is not statistically significant. PPE/S has the predicted negative sign but is not significant. DUMMYCEO has the opposite sign to that predicted but is not significant.

In Table 8.10, Panel B shows the regression of ROA on the CGScore, and the control variables. An increase of one point on CGScore results in an increase of 7% in ROA. In each of the Models 2, 3, 4 and 5 CGScore maintains the same positive sign and is statistically insignificant. LOG (TA) has the predicted positive sign (see Table 8.4) and is weakly significant in Model 2 only. GROWTH, PPE/S and DUMMYCEO have no association with company performance measured as ROA.

In Table 8.10, Panel C shows the regression of MBV on the CGScore, and the control variables. An increase of one point on CGScore results in an increase of 16% in MBV, however, the result is statistically insignificant. The control variables, LOG (TA), GROWTH, PPE/S and DUMMYCEO have no association with MBV, as they are statistically insignificant.

**Table 8.10: OLS Regressions - Performance as Dependent Variable**

$$TQ = \alpha_0 + \beta_1 CGSCORE + \beta_2 LOG(TA)_1 + \beta_3 GROWTH + \beta_4 PPES + \beta_5 DUMMYCEO + \varepsilon$$

**Equation 8.3**

Dep. Var:	PANEL A: TQ					PANEL B: ROA					PANEL C: MBV				
Models	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
C	0.91 [2.37]*	1.55 [3.26]**	1.63 [3.08]**	1.67 [3.14]**	1.99 [3.34]**	-0.98 [-1.98]	-1.74 [-2.84]**	-1.78 [-2.62]*	-1.79 [-2.61]*	-1.52 [-1.97]	-0.28 [-0.21]	0.16 [0.10]	0.67 [0.37]	0.71 [0.38]	1.32 [0.64]
CGSCORE	0.05 [1.36]	0.04 [1.32]	0.04 [1.17]	0.04 [1.05]	0.05 [1.42]	0.07 [1.73]	0.08 [1.81]	0.08 [1.73]	0.08 [1.74]	0.09 [1.89]	0.16 [1.42]	0.16 [1.40]	0.14 [1.20]	0.14 [1.15]	0.17 [1.31]
LOG(TA)		-0.18 [-2.20]*	-0.19 [-2.16]*	-0.18 [-2.00]*	-0.21 [-2.25]*		0.21 [2.04]*	0.22 [1.97]	0.22 [1.92]	0.19 [1.62]		-0.12 [-0.43]	-0.19 [-0.64]	-0.18 [-0.59]	-0.24 [-0.75]
GROWTH			0.04 [0.60]	0.04 [0.63]	0.03 [0.50]			0.04 [0.49]	0.04 [0.48]	0.03 [0.39]			0.10 [0.45]	0.10 [0.46]	0.09 [0.39]
PPES				-0.04 [-0.99]	-0.05 [-1.23]				0.01 [0.18]	-0.00 [-0.00]				-0.04 [-0.28]	-0.06 [-0.42]
DUMMYCEO					-0.46 [-1.18]					-0.39 [-0.76]					-0.88 [-0.65]
Observations:	109	109	106	106	106	109	109	106	106	106	109	109	106	106	106
R-squared:	0.02	0.06	0.07	0.08	0.09	0.03	0.06	0.06	0.06	0.06	0.02	0.02	0.02	0.02	0.03
F-statistic:	1.86	3.39	2.44	2.07	1.94	2.98	3.61	2.09	1.56	1.36	2.02	1.10	0.74	0.57	0.54

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

## 8.10: Robustness Test: Lagged performance variables

Table 8.11 shows the results of using lagged performance variables, Using CGScore as the dependent variable, in Panel A, the regressions of the CGScore and performance has a positive coefficient, but statistically insignificant. For control variables, only the DUMMYCEO is positive and statistically significant.

In Panel B, the regression of performance as the dependent variable and CGScore is positive irrespective of the measure of the performance variable, but statistically insignificant. With MBV, lagged one year shows that the control variable, GROWTH, has a negative coefficient and is statistically significant. None of the other control variables is statistically significant.

**Table 8.11: Using Lagged Performance Variables**

	<i>PANEL A: Dep. Var. CGScore</i>			<i>PANEL B: Dep. Var. Lagged performance</i>		
				<i>TQ(-1)</i>	<i>ROA(-1)</i>	<i>MBV(-1)</i>
C	7.10 [4.76]**	7.65 [5.48]**	7.57 [5.44]**	1.85 [3.03]**	-2.79 [-1.09]	-0.38 [-0.19]
TQ(-1)	0.23 [0.87]					
LOG(TA)	0.09 [0.36]	0.08 [0.33]	0.05 [0.22]	-0.13 [-1.41]	-0.53 [-1.35]	0.24 [0.78]
GROWTH	-0.06 [-0.37]	-0.10 [-0.57]	-0.07 [-0.41]	-0.12 [-1.88]	0.16 [0.59]	-0.81 [-3.91]**
PPES	0.00 [0.04]	-0.01 [-0.07]	-0.00 [-0.03]	-0.03 [-0.85]	0.10 [0.59]	-0.01 [-0.05]
DUMMYCEO	4.13 [4.33]**	3.94 [4.02]**	4.07 [4.23]**	-0.32 [-0.81]	3.31 [1.98]	1.05 [0.81]
ROA(-1)		0.04 [0.62]				
MBV(-1)			0.02 [0.25]			
CGSCORE				0.03 [0.87]	0.10 [0.62]	0.03 [0.25]
Observations:	105	105	105	105	105	105
R-squared:	0.19	0.19	0.18	0.06	0.10	0.16
F-statistic:	4.64	4.55	4.47	1.32	2.24	3.86

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

### **Huber/White/Sandwich Estimator of Variance**

This robustness check conducted consists in re-estimating all the regression coefficients, with using the White (1980) estimation of heteroskedasticity. Using the White cross section for the covariance suggests that the data are contemporaneously correlated, or put differently those clustered by period. The White variance – covariance matrix of the coefficients, the calculation of the standard errors using the White correction for heteroskedasticity, is appropriate when the residuals of the estimated equation are heteroscedasticity, but serially uncorrelated (Brooks 2014, 201). Severe heteroskedasticity can sometimes be a problem. This process generates larger standard errors and, therefore, the estimated t-results can be much lower than those found using the traditional OLS estimates. Fortunately, unless heteroskedasticity is ‘marked’, significance tests are virtually unaffected, and; therefore, there are no concerns of serious distortion in the OLS estimations. The results in Table 8.13 show that the inclusion of White’s estimation has no effect on the coefficients value and direction, and the adjusted R-square.

The results are similar with any of the three performance measures used (see Table 8.10), that is, coefficients and the signs remain unchanged with the introduction of White (1980) heteroskedasticity test. However, with White measurement of heteroskedasticity ROA is now statistically significant.

**Table 8.12: OLS Regression of CGScore and Performance for White Heteroskedasticity**

Dependent Variable: CGScore						
	PANEL A: no White heteroskedasticity			PANEL B: no White heteroskedasticity		
C	6.64 [4.31]**	7.86 [5.59]**	7.28 [5.12]**	6.64 [3.91]**	6.64 [3.91]**	7.28 [5.03]**
TQ	0.38 [1.42]			0.38 [1.13]	0.38 [1.13]	
LOG(TA)	0.15 [0.61]	0.00 [0.01]	0.10 [0.41]	0.15 [0.54]	0.15 [0.54]	0.10 [0.37]
GROWTH	-0.10 [-0.59]	-0.10 [-0.59]	-0.10 [-0.58]	-0.10 [-0.70]	-0.10 [-0.70]	-0.10 [-0.65]
PPES	-0.00 [-0.01]	-0.02 [-0.18]	-0.01 [-0.13]	-0.00 [-0.01]	-0.00 [-0.01]	-0.01 [-0.18]
DUMMYCEO	4.08 [4.21]**	3.99 [4.17]**	4.00 [4.14]**	4.08 [3.93]**	4.08 [3.93]**	4.00 [3.90]**
ROA		0.38 [1.89]				
MBV			0.10 [1.31]			0.10 [1.15]
Observations:	106	106	106	106	106	106
R-squared:	0.19	0.20	0.18	0.19	0.19	0.18
F-statistic:	4.60	4.98	4.53	4.60	4.60	4.53

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

### Regression of individual corporate governance attributes

Table 8.13 shows the association of the each of the six sub-indices and performance. Each subindex is regressed on performance while controlling for company size, GROWTH, PPE/S and DUMMYCEO. TQ has a positive coefficient with board committee, board independence, board power and the two remuneration subindexes. With board transparency, the coefficient is negative. None of the results is statistically significant. It is not certain whether adopting the individual corporate governance practices as measured by the separate indicators contributes to higher performance. For the AIM sample, one explanation for the absence of a significant relationship between the corporate governance variables and company performance is that the corporate governance may only matter for certain board actions. The results of Table 8.13 contrasts Bruno and Claessens (2007); (2010) studies, who find that at company level, the regression of TQ on corporate governance indicators has a positive coefficient and statistically significant relationship with board committee,

board independence and board transparency<sup>66</sup>. Non-executive directors may possess characteristic of being independent, and although the evidence relating to independence characteristics tends to support the positive relationship, but is insignificant. This result questions the pressure to increase the number of independent non-executive directors.

With ROA, in Panel B, as the performance variable, results are similar, except that REM1 has a positive coefficient and is weakly significant. The positive coefficient between the variables REM1 and ROA suggests that the remuneration of executive directors is dependent on the accounting profit rate.

All the above variables have low explanatory power for the changes in company performance and suggest that there are omitted variables or other factors, for example, CEO characteristics may be affecting the results. Stronger board power (that is, CEO) is associated with lower return on assets, lower capital expenditure and higher structure of remuneration package. Interestingly, in Panel A and Panel B, BOD3P, shows that the variability of the explanatory variables is 58% and 59% for TQ and ROA as performance measures, respectively.

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<sup>66</sup> Bruno and Claessens use TQ as the dependent variable, when I used TQ and ROA as the dependent variable the direction of the coefficients for board committee, board independence, board power and board transparency did not change and were statistically insignificant.

**Table 8.13: Regression of Individual Corporate Governance Attributes**

Dep. Var Subindices	Panel A – TQ as the explanatory variable						Panel B– ROA as the explanatory variable					
	BOD1C	BOD2I	BOD3P	BOD4T	REM1	REM2	BOD1C	BOD2I	BOD3P	BOD4T	REM1	REM2
C	1.56 [4.06]**	0.70 [1.48]	-0.18 [-0.84]	1.98 [4.60]**	1.57 [1.90]	1.00 [3.20]**	1.74 [4.92]**	1.09 [2.51]*	-0.13 [-0.67]	1.83 [4.62]**	2.09 [2.82]**	1.20 [4.13]**
TQ	0.07 [1.06]	0.13 [1.65]	0.01 [0.34]	-0.06 [-0.81]	0.13 [0.94]	0.08 [1.57]						
LOG(TA)	0.03 [0.46]	0.02 [0.26]	0.09 [2.73]**	0.04 [0.64]	0.08 [0.56]	-0.10 [-2.05]*	0.01 [0.17]	-0.02 [-0.32]	0.09 [2.56]*	0.06 [0.83]	-0.00 [-0.01]	-0.12 [-2.39]*
GROWTH	-0.08 [-1.88]	-0.00 [-0.01]	0.03 [1.21]	0.01 [0.28]	-0.02 [-0.26]	-0.04 [-1.10]	-0.08 [-1.84]	0.00 [0.02]	0.03 [1.20]	0.01 [0.25]	-0.03 [-0.29]	-0.04 [-1.02]
PPE/S	0.03 [1.14]	0.05 [1.41]	-0.00 [-0.02]	-0.02 [-0.54]	-0.08 [-1.33]	0.02 [0.72]	0.03 [1.01]	0.04 [1.21]	-0.00 [-0.06]	-0.01 [-0.44]	-0.08 [-1.48]	0.01 [0.52]
DUMMYCEO	0.64 [2.66]**	0.72 [2.44]*	1.50 [11.36]**	-0.05 [-0.20]	0.97 [1.88]	0.29 [1.49]	0.62 [2.58]*	0.69 [2.33]*	1.50 [11.39]**	-0.04 [-0.14]	0.94 [1.87]	0.27 [1.37]
ROA						0.02	0.09 [0.42]	0.02 [1.43]	-0.00 [0.78]	0.25 [-0.07]	0.00 [2.34]*	[0.07]
Observations:	106	106	106	106	106	106	106	106	106	106	106	106
R-squared:	0.11	0.08	0.58	0.02	0.08	0.12	0.11	0.08	0.59	0.01	0.12	0.10

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

## **Endogeneity**

Using 1 year lagged values for TQ and ROA, and the set of control variables with two stage least squares regressions find that the sign and value of the coefficients did not change to the one obtained using an OLS regression indicating no evidence of endogeneity. Hence, endogeneity is not a problem in this particular study.

## **8.11: Conclusion**

The study in this chapter demonstrates the effect of the determinants of corporate governance, using manually constructed CGScore. In general, the companies in the AIM companies sample have adopted good corporate governance practices for the two years 2008 and 2009. Specifically, the study finds that 90% of the companies have audit and remuneration committee, whereas only 28% of the companies had a nomination committee, and the reason suggested in the annual reports relates to the size of the company. The data shows that the Cadbury's recommendations are widely followed by the AIM companies as to the presence and reporting of board subcommittees, in particular the audit and remuneration committees. In addition, number of non-executive director representation on the board has increased. With the audit and remuneration committees, 70% of the companies consist of independent non-executive directors, whereas with the nomination committee the percentage was much lower at 17%. The high percentage of audit and remuneration committees suggest that AIM companies are steering towards greater emphasis on the internal structural governance mechanisms, and this may be due to the guidance of the NOMADS.

Hypothesis 1 predicted that if there is an increase in the corporate governance index, as a measure of quality of corporate governance disclosure, and then the company's performance will increase. However, the results do not show any significant relationship with any measure of company performance and hence the hypothesis 1 is rejected.

Hypothesis 2 predicted that increase in the corporate governance index, will result in lower ownership shareholdings. The results show that the relationship between CGScore and director ownership is concave giving a positive-negative relationship with DIR\_OWNP and DIROWN<sup>2</sup>, respectively and statistically significant at 10% level. Intuitively, this suggests that when the level of CGScore is high the need for higher ownership levels is not necessary to align the interests of the shareholders, since the direction of the coefficient is positive at lower levels of CGScore, and turns negative at higher levels of CGScore. Using institutional ownership holdings does not give any association. With the largest shareholder and its square form, the relationship is positive-negative and statistically significant at 5% level. Therefore, the hypothesis 2 is supported by the presence of the largest shareholder.

Hypothesis 3 predicted that if company performance increases, would result in an increase in the CGScore. However, the results do not support the hypothesis 3. In this chapter, H1 and H3 are rejected and H2 is supported only as regards the largest shareholder.

The results suggest that the CGScore and company performance are independent of each other. One reason for the lack of significance can be explained due to the small sample size of the AIM compared to other research in emerging markets or Anglo-Saxon countries. Further, most of the research conducted in Anglo-Saxon countries and emerging markets have used large companies listed on the stock market. For the above reasons, comparisons between prior works are more difficult to interpret. Another explanation is that the data were for the period, which includes the severe global financial crisis of 2008 and 2009. The financial crisis may have contributed to the evidence that there is no significance between the CGScore and company performance, or vice versa, using performance measures based on either market measures, TQ and MBV, or the accounting profitability, ROA.

Cadbury Report (paragraph 2.1), suggests that the economic downturn, weak internal control may be the key causative factors. The results show that an overall

corporate governance score is not a causal factor in explaining the company performance, or vice versa, in the case of AIM companies. Black *et al.* (2006), posit an interesting question as to whether better corporate governance practices of firms within a single country affects the firms' market value. They find for Korean companies a causal relationship between corporate governance index and higher share prices, and hence higher market value. The result of using this sample of AIM companies in this chapter does not provide the same evidence as that of Black *et al.* (2006).

The results of this study contradict Klapper and Love (2004) and Gompers *et al.* (2003) who show high correlation between the presence of good corporate governance practices and firm market valuation. According to Demsetz and Lehn (1985), a significant concern on corporate governance studies is due to potential endogeneity between the dependent and explanatory variables. For example, it is possible that companies with higher market values may adopt good governance practices, in order to improve company performance and, therefore, the share prices are higher. Black *et al.* (2006), alternatively explain that companies may adopt good corporate governance practices as a signal for appropriate behaviour and thereby increase share prices. The results suggest that the endogeneity of the reverse causation did not matter. The study in this chapter was motivated, in part, by the claims of researchers that a corporate governance index is directly related to the profit measure and the company size, yet there was little systematic evidence to this effect, in particular for small companies within the context of UK. However, the composite corporate governance index and its sub-indices do not show any relationship between any measure of corporate governance and the company characteristics. The study shows that DIR\_OWNP and the LARGEST shareholder have a non-linear association with CGScore, and institutional ownership shows no association with the square form of the institutional ownership variable. Hence, this specific study rejects the monitoring effect by the institutional shareholders in the case of the AIM companies. For the sort of companies on AIM, the average corporate governance mechanisms that are mandated by the codes do not matter, but what matters is ownership. Thus, Chapter 9 considers further the determinants of ownership concentration as a governance variable.

## 8.12: Limitations to the Study

There may be some problems of judgemental error in the manual construction of the corporate governance score. The major problem with the manual construction of the index is that it is very labour intensive and hence only feasible for small samples.

One of the limitations of this study is that the sample size and the number of different corporate governance items are much smaller, compared to other research, which may restrict generalisation and meaningful interpretation. For example, Gompers *et al.* (2003) use 24 different corporate governance provisions for an average of 1,500 companies per year from 1990 to 1999. Although the exercise of formatting disclosure index is simple, there are a number of limitations such as the uncertainty of the exact number of governance recommendations and its usefulness will be highly dependent on the items selected in the formation of the index. In a smaller sample size there might have been a relationship, but need a bigger relationship for statistical significance, hence the small sample size of 50 companies has restricted the statistical significance. With a bigger sample size, even a small relationship can be shown to be statistically significant.

Another problem encountered is to whether to use a weighted index score, partial scores or a ranked score. Marston and Shrivs (1991, 396) comment that there is not a favoured index with researchers and most researchers adapt and tailor existing indices to meet their own requirements.

Another problem that arises is that certain items of disclosure may not be applicable to specific companies, for example, not all companies provide share options to their directors. Hence, companies should not be penalised for non-disclosure in this case. Cooke (1989) noted that in cases of non-disclosure of an item is not always clear whether an item is relevant or not. For example, non-disclosure of non-audit fees may be either that there is none, or that the company is declining to disclose them. This, therefore, involves reading the whole of the annual report to judge an item either irrelevant or not disclosed by the company.

Another limitation of the study pertains to the fact that there is no agreement in the literature as to the optimum method of measuring voluntary disclosure (Urquiza *et al.* 2009). Hence, the results and the analysis will depend on the two common methods available for developing the index: either construct own index or purchase from commercially available sources. The index used here is constructed by the researcher based on Bruno and Claessens (2007). Although, Mallin and Ow-Yong (2012); Farag *et al.* (2014) construct their own disclosure of governance index, using the data from the AIM, the results are different to that found in this chapter. The difference can be attributed to the period and the attributes they use to develop the corporate governance index.

### **8.13: Future Research**

Future study can use a larger sample over a longer period to show if there is a causal relationship between an overall governance score and company value. In addition, future analysis can consider whether an industry affects adoption of good corporate governance structures. Therefore, by using more data the companies can be split into industry types to see if specific sectors can explain the governance disclosure.

Future study could do a comparison of corporate governance index measurement over a different time period and using the minimum disclosures required by the Quoted Companies Corporate Governance Guidelines for Smaller Quoted Companies, for example before and after the financial crisis period of 2008 to 2009.

Furthermore, to create portfolios of companies by ranking, using size and the three risk factor model of Fama and French (1993), to examine the effect of corporate governance to equity performances. Puksamatanan and Nittayagasetwat (2012) adopt this method for the determinants of corporate governance, using corporate governance characteristics on the equity returns of companies listed in Thailand.

It is possible that other corporate governance mechanisms are influencing the corporate governance practices and company performance such as ownership. Researchers have shown that ownership structures can matter as well, but the empirical results are mixed, for example, companies with greater concentration of ownership may invest more (Durnev and Kim 2005) or less (Dojige *et al.* 2007) in improving governance practices. The ownership structure is explored further in the next chapter.

## CHAPTER 9 OWNERSHIP AND COMPANY PERFORMANCE

### 9.1: Introduction

This chapter considers a single corporate governance variable, ownership, compared to Chapter 8, which uses an overall corporate governance index to determine the relationship with company performance. This chapter builds a panel data set for 131 companies from the Alternative Investment Market (AIM) covering all the industrial sectors for the period 2008 -2010. This chapter considers first the determinants of ownership and secondly, that the performance of companies is non-linearly related to the percentage of equity shares held by directors. The ordinary least square regressions show that the regression of CEO and cumulative director shareholdings give a negative and statistically significant association with TQ. Whereas institutional shareholdings is positive and statistically significant suggesting that the institutional shareholdings results are complementary to that of the director or CEO ownership. The omission of fixed-effects in the regression of corporate performance and director ownership shows an association with both TQ and ROA and director ownership. Whereas the inclusion of fixed-effects, TQ shows no association, but ROA coefficient remains positive and is statistically significant.

One of the recommendations for overseeing of managers and shareholders' conflict of interest in a publicly traded company, where the interests of the managers and shareholders are misaligned, is to provide equity shares to the managers. However, the question to ask is, why does one observe that the managers of some companies possess large ownership shareholdings, whereas the managers of others do not? If there is an optimal level of the managerial ownership, most appropriate to maximise return to shareholders, why do the managers not try to adjust their ownership to an optimal level? If an optimal level of managerial ownership exists, what would it look like? It may be that, in practice, the optimal level of managerial ownership varies from one company to another. For example, when the manager owns 100 per cent of shares, that is, when the manager and owner are the same, and the problems associated with the principal-agent relationship (see Figure 3.1) do not occur. However, when the managerial ownership is less than 100 percent and the

owners and managers are separate, is there a threshold level below which managers and shareholders' interests do not align? It may be that, in practice, the optimal level of managerial ownership varies from one company to another. The main interest in this chapter is whether a relationship exists between managerial ownership and company performance. How does managerial ownership affect company performance? To what extent is company performance a factor determining managerial ownership, and what other determinants are there?

The factors that are considered to influence managerial ownership examined empirically are size, leverage, cash and cash equivalents, capital expenditure, volatility, duality of the Chief Executive Officer (CEO) and chairman, and board independence. Prior literature has examined most of these factors, but to date most of the studies between managerial ownership and company performance has been primarily for the largest listed companies in any country. For this study, the empirical analysis extends to a sample of Alternative Investment Market (AIM) companies for the three-year period 2008 to 2010.

Managerial theorists argue that the separation of ownership from control allows managers to pursue their own objectives, but this may be detrimental to the maximisation of shareholder wealth. Agency costs arise because of direct expropriation of funds by managers, excessive perquisites, for example, the case of Conrad Black in Hollinger International, discussed by Kolla (2004, 837), shirking and entrenchment (Shleifer and Vishny 1989). Managerial theory explains how managers use their effective control rights to pursue projects that benefit the managers, but that may be detrimental to the shareholders (Baumol 1959; Marris 1964; Williamson 1964; Jensen 1986).

Academics argue that the concentrated ownership as a governance mechanism can reduce one of the major principal-agent problems, that is, the conflict of interest between shareholders and managers. Here, the institutional shareholders, who have the resources, access to managers and the power to monitor, are perhaps best suited to ensure that the managers act in the best interest of the shareholders.

This monitoring role is associated with higher valuation (Ferreira and Matos 2008, 521). Despite the institutional shareholders holding more shares in companies, there have been recent examples of governance failures. For example, the Royal Bank of Scotland and Northern Rock in the United Kingdom, where managers expanded their company by adopting high-risk strategies, both of which have received considerable press coverage viewed through the lens of a shareholder model.

### **Why is the Study Important?**

Should managers hold stock? Company managers regularly own a significant proportion of the shares of their companies. For an individual director, these holdings of their company's shares may make up the main part of his/her personal wealth. Owning large portions of shares in a single company involves costs in terms of foregone diversification. Von Lilienfeld-Toal and Ruenzi (2014) conclude that a significant minority of CEOs hold a large proportion of their own companies and has a positive effect on stock market returns. However, in the context of the AIM where the owners may be same as the managers and, therefore, expect the managers to own large shareholdings of their own companies as ultimately it is in their own interest as a long-term investment. The expectation is that due to the nature of the AIM companies they will exhibit more concentrated ownership structures rather than the diffused ownership structure. The characteristics of AIM companies are that they are younger, and the intangible assets (Colombelli 2009) are important in shaping the performance of firms listed on the AIM. The AIM companies have higher intangibles and, therefore, require equity finance, as their asset base has little or no value on forced sale of the assets. According to Cassia *et al.* (2009, 212) *'these firms are in the entrepreneurial phase, characterised by high innovativeness and entrepreneurial creativity'*. The problem with this is that the company's value will relate mainly to future growth opportunities, and this will be less attractive for banks to provide finance (Shleifer and Vishny 1997, 765). Shleifer and Vishny *'observe greater use of equity finance for young, growing companies'* and for those in fast growing economies whereas there is greater reliance on bank finance for mature companies (p. 765).

## 9.2: UK Regulation

The UK adoption of the practice of disclosure regulations for substantial shareholdings in companies dates back to the Cohen Report 1945<sup>67</sup> that recommended the disclosure of beneficial ownership of shares should apply to all UK public companies listed or non-listed, unlike the EU Transparency Directive (TD). The Cohen Committee addressed the concerns in respect of the dispersion of capital among small shareholders. The Cohen Committee's recommendations formed part of the Companies Act 1948, which includes the following: voting by proxy, provisions to induce an extraordinary general meeting with 10% for the voting rights and resolutions to oust the directors. Interestingly, it was by statute rather than the use of the common law that brought about these changes and improves investor protection. The UK company law also stipulates a threshold of three percent for the disclosure of beneficial share ownership compared to ten percent as per the TD. The disclosure rules are important as it allows existing and potential shareholders to know whether there are in existence substantial shareholdings of shares, which might enable an individual, a corporation or group to control the activities of the company. Moreover, if such a situation arises, it allows the identification of a significant shareholder(s). For the period 1985 to 1989, the disclosure threshold was five percent proposed by the Conservative Companies Bill, 1973/74. The EU Transparency Directive (TD) brings in a new rule for periodic financial reporting and the disclosure of significant shareholdings. The Financial Services Authority (FSA) has implemented the TD in the UK; subsequently the LSE Listing Rules have adopted the Disclosure Rules, which are combined into the Disclosure and Transparency Rules (DTR). Whilst the UK has retained the 3% threshold for substantial shareholder ownership disclosure, the TD only requires notification when the proportion of voting rights exceed or falls below the threshold percentages of 5, 10, 15, 20, 25, 30, 50 and 75. On 1 April 2013, the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA) replaced the FSA. With the new regulators, compared to the FSA, in particular the FCA, there

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<sup>67</sup> [http://www.takeovers.gov.au/content/Resources/other\\_resources/Cohen\\_Committee.aspx](http://www.takeovers.gov.au/content/Resources/other_resources/Cohen_Committee.aspx), section 82 accessed 18/07/2013

is a shift from a light touch regulation (specifically for the financial services) to a stronger judgement based regulation.

Both the UK and US exhibit a high level of protection provided to minority shareholders (La Porta *et al.* 1997). UK has a common law setting and provides minority shareholder protection derived from court rulings. In *Foss v Harbottle*, 1843 (cited in Franks *et al.* (2009, 4010), the conclusion was that the majority of the shareholders take decisions within a company (that is, rule of majority supremacy) and that individual shareholders under normal circumstances cannot appeal against such decisions. However, in *Menier v Hooper s Telegraph Works Ltd*, 1974, the courts found an exception to the majority rule, where the intention of the majority of shareholders is to profit and disadvantage the minority shareholders. This is an important agency theory problem described as the expropriation of minority shareholders. According to Shleifer and Vishny (1997, 741), when financiers provide funds, they expect to retain the residual control rights. In practice, this is not possible due to the financiers' lack of information to make appropriate decisions. Consequently, the managers receive residual control rights and discretion to decision making. In return, the financiers receive certain rights in relation to the assets of the company due to the explicit contract. Unlike other creditors, shareholders do not receive regular interest payment, however, may receive dividends at the discretion of the managers (Shleifer and Vishny, 1997:764).

The organisation of the remaining part of this chapter is as follows: section 9.3 reviews the relevant literature. Section 9.4 describes the variables, section 9.5 describes the data set and section 9.6 discusses the issues of endogeneity. Section 9.7 discusses the development of the hypothesis for the determinants of ownership at company level corporate governance and determinants of company performance. Section 9.8 presents and discusses the empirical results for ownership shareholdings, performance and control variables at the company level. Section 9.9 considers the robustness tests. Section 9.10 concludes.

### 9.3: Literature Review

Prior empirical studies show a mixed relationship between managerial ownership and firm performance. Some studies find a positive and significant relationship between managerial ownership and company performance include, for example, Mehran (1995); Core and Larcker (2002). McConnell *et al.* (2008, 93) interpret the empirical relationship to mean that ownership 'matters' and that a change in share ownership by managers will subsequently change corporate value.

Empirical studies that have found no relationship between managerial ownership and company performance include (Agrawal and Knoeber 1996; Loderer and Martin 1997; Himmelberg *et al.* 1999; Demsetz and Villalonga 2001).

#### **Non Linear Relation between ownership and firm value**

The research by Morck *et al.* (1988); McConnell and Servaes (1990) find a non-linear relationship between ownership structure and firm performance. Both studies use TQ and percentage of shares owned by the board of directors as a measure of firm performance and ownership, respectively. Morck *et al.* use a piecewise linear regression method and calculate the coefficients on the ownership variables at 5% and 25% ownership levels. They find that the slope is positive over the range of 0% to 5% of managerial ownership, negative over the range 5% to 25% of managerial ownership and positive above the 25% managerial ownership, although more slowly (p. 311). Morck *et al.* interpret the results as follows: the positive slope between 0% and 5% is reflecting the 'convergence of interests' and the negative relationship between 5% and 25% suggests that the 'entrenchment' effect is dominating. Morck *et al.* (1988) results are similar to different measures of performance, for example, using a profitability rate measured as the firm's net cash flow less adjusted depreciation divided by the replacement costs of its tangible assets. Morck *et al.* propose an alternative view where increased ownership by the management leads to entrenchment, where the manager will indulge in non-value maximizing behaviour. The entrenchment hypothesis predicts that the value of the firm will be less when management is free from checks on their control, and suggests that firm performance decline as management ownership increases.

McConnell and Servaes (1990) use a large sample of 1,100 companies from the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) and find a non-linear relationship between TQ and insider ownership for the two years 1976 and 1986. McConnell and Servaes estimate a quadratic equation, which includes the percentage of shares owned by directors, and its square form. McConnell and Servaes results are similar to that of Morck *et al.* (1988) between the ranges 0% to 5% and find a positive and significant relationship between TQ and insider ownership. However, McConnell and Servaes find the slope over the range from 5% to 25% is positive and insignificant, which contrasts the findings of Morck *et al.* (1988).

Hermalin and Weisbach (1991) use a piecewise linear regression for 142 companies on NYSE. They use a panel data for five years, 1971, 1974, 1977, 1980, and 1983 and find a non-linear relationship between managerial ownership and TQ. However, their results show a positive relationship between managerial ownership and TQ in the 0% to 1% and beyond the 1%, increase in managerial ownership the relationship with TQ is negative. They explain that the incentive alignment dominates over the range 0% to 1% and the entrenchment effect dominates over the 1% ownership. As shown above their results differ from that of Morck *et al.* (1988) and McConnell and Servaes (1990).

Short and Keasey (1999) show a cubic relationship with managerial ownership for large UK companies and report that director ownership affects firm value as measured by TQ positively when members own below 12.99% or above 41.99%. Between these two values, they find that performance declines suggesting managerial entrenchment.

Mura (2007) conclude that there is a relationship between directors' ownership and firm performance and that the direction of causality runs from ownership to performance. Results also confirm the cubic relation predicted by the alignment - entrenchment hypothesis. Mura finds that there is convergence when managers own up to 15.06% of the shareholdings, and thereafter between 15.06%

and 45.43%, entrenchment dominates. When board ownership exceeds 45.43%, there is a positive relationship between ownership and TQ.

### **No Relation between ownership and company value**

Demsetz and Lehn (1985) find no significant relationship between profit rate and ownership concentration. Demsetz and Lehn's study varies compared to that of Morck *et al.* (1988); McConnell and Servaes (1990) discussed above in that Demsetz and Lehn (1985) use the fraction of shares owned by the largest five and largest twenty shareholders (p.1163), and these may not necessarily be the management. In addition, they do not test for a non-linear relationship. They argue that ownership concentration is endogenously determined by both company and industry specific factors, such as, risk and capital requirements.

Karathanassis and Drakos (2004) use 59 companies listed on the Athens Stock Exchange for the period 1996 to 1998 using time series and cross section data with fixed and random effects. They find no relationship between managerial ownership and firm performance, but find a positive relationship between institutional shareholders ownership and corporate value suggesting that this supports the efficient monitoring hypothesis.

### **Simultaneous equation studies**

Majority of the current research applies the simultaneous equation method to deal with the endogeneity problem of managerial ownership. Loderer and Martin (1997) use simultaneous equations estimation methodology by setting managerial ownership and firm performance as endogenous variables in a two-equation system. Using a sample of 867 corporations, which participate in buy-outs, they conclude that the high performance leads to lower levels of managerial ownership. One explanation for the negative effect of corporate performance on managerial ownership is that TQ measures growth opportunities, and the share price will adjust accordingly. Therefore, there is no plausible reason for managers to hold stocks of companies with high corporate value.

Cho (1998) examines the relationship between ownership structure, investment, and the company's value with respect to the potential role of the ownership structure as a determining factor on investment. Using a sample of 326 companies from Fortune 500, Cho finds different results depending on the econometric method applied. Using OLS method, ownership structure affects the value of the firm while using the simultaneous equations shows that investments affect firm performance, which in turn affects ownership status, but not vice versa. Cho constructs a three-equation model where performance, ownership and corporate investment are endogenous variables. He finds that performance is a positive predictor of ownership but not vice versa.

Himmelberg *et al.* (1999) argue that both managerial ownership and firm performance may be endogenously determined by exogenous or other factors within the firm. With fixed effect panel data and controlling for heterogeneity, they find no statistically significant correlation between managerial ownership and corporate performance. However, using instrumental variables for endogeneity of ownership they find that a quadratic specification describes the effect of ownership on firm performance. Himmelberg *et al.* (1999) conclude that previous works were unable to examine the non-observable heterogeneity of the business and hence any relationship detected might result from spurious correlations.

Demsetz and Villalonga (2001) examine the issue of ownership structure and corporate performance arguing that ownership structure should not be considered as an endogenous variable, but rather as a synthesis of many shareholders with different interests. Using a sample of 223 companies from Fortune 500 for the period 1976-1980, they empirically test using OLS and 2SLS methods. They conclude that ownership structure, whether defined as high concentration or diffused does not appear to have a significant impact on firm performance.

Davies *et al.* (2005) propose an alternative structure to the association between managerial ownership and corporate value. Their model captures non-linearity at higher levels of managerial ownership and report a quintic specification.

They use 752 UK listed industrial companies for the year 1995, the authors conclude that even if one accounts for the endogenous relationship between managerial ownership and corporate value misspecification in the model will give spurious conclusions concerning the direction of causality. They provide evidence that the managerial ownership and the firm value relationship are co-deterministic; suggesting that the correct form for ownership and company value relationship is a double humped curve.

Amongst the empirical studies that do not consider endogeneity on the relationship between company value and ownership structure are Morck *et al.* (1988); McConnell and Servaes (1990); Short and Keasey (1999). However, other authors have considered that endogeneity is an important issue in the study of the relationship between company value and ownership structure because of the causality of ownership on company value. The inclusion of endogeneity as criteria has become possible due to the availability of techniques such as the simultaneous equations, two stage least square, three stage least square and generalised method of moments, which facilitate the testing of endogeneity between variables such as firm ownership and firm performance.

### **Industry level factors**

Richter and Weiss (2013) use a sample of 900 companies from nine countries find that the variation due to industry level factors in ownership concentration is low at 2% of the total variance in ownership concentration. At the industry level, they use the Standard Industrial Classification code of the industry that the company belongs to, and a dummy variable for financial services and utilities as one, and all other industries as zero. In addition, none of the industry level factors proved to be statistically significant. They find the following company specific factors as determinants of ownership concentration: company size, company specific risks are only able to explain a small proportion of the company level variation in ownership concentration.

One of the reasons for the differences in the ownership and performance relationship may be attributable to the variation in the company size within the sample used by different researchers (Kole 1995 cited in Short and Keasey 1999, 81). Considering the above literature that the relationship between ownership and company performance is mixed on the shape of the relationship and the causality not only in UK but also in the US studies, justifies further study of the AIM companies.

#### **9.4: Variables**

This section discusses the ownership structure variables, company performance variables, and control variables (for additional details see Chapter 7 and Table 9.1).

##### **Ownership Variables**

The ownership variable for AIM companies in this chapter include the percentage of share holding of the CEO, cumulative board directors, institutional shareholders, largest shareholder and the cumulative largest 5 shareholders. Short and Keasey (1999) use the percentage of shares owned by directors, institutional shareholders owning more than 5% and shares held by other external ownership interest. In contrast to Short and Keasey, this chapter uses institutional share ownership at 3% level.

In this study, an assumption made is that ownership structure data relate to the percentage of equity shares, which conform to the one vote for each ordinary share, held. The ownership data from S&P Capital IQ were checked using the company's annual reports, but there were some differences. These variations arose due to the difference in timing of the company's annual reports year-end, which did not coincide with the end of the year data available for the ownership shareholdings.

##### **Performance Variables**

This chapter uses Tobin's Q (TQ), Return on Assets (ROA) and market to book value (MBV) as the measures of performance. Demsetz and Lehn (1985) use accounting profit rate to measure performance. TQ, a forward looking measure, has

been used to analyse most relation between ownership structure and performance (for example, Morck *et al.* 1988; Lang and Stulz 1994; Himmelberg *et al.* 1999; Coles *et al.* 2003; Gompers *et al.* 2003; Drakos and Bekiris 2010).

### **Control Variables**

The control variables used in this chapter have been selected by reference to those employed in previous empirical studies, in particular (Demsetz and Lehn 1985; Loderer and Martin 1997; Short and Keasey 1999; Demsetz and Villalonga 2001; Drakos and Bekiris 2010). These are company size, leverage, capital expenditure, volatility, that is, market risk, cash holdings (cash and cash equivalent to total assets), property plant and equipment over total assets and company age since listing on the AIM. The directors' independence and CEO duality are used as determinants of managerial ownership factors. The control variables are described in Table 9.1. Other studies have also included industrial dummies; however, industrial dummies were not used in this analysis as increasing the number of dummy variables would have imposed severe restrictions on the degree of freedom in the regression. Table 9.2 shows the expected signs.

**Table 9.1: Definition of the Variables**

<i>Variables</i>	<i>Definition</i>	<i>Source</i>
<b>Company Performance Variables</b>		
TQ	Tobin's Q approximation = sum of the total market value plus book value of total assets minus shareholders equity divided by the book value of total assets	S&P Capital IQ
ROA	Return on Assets: profit before interest and tax divided by total assets	S&P Capital IQ
MBV	Market capitalisation divided by book value of total assets	S&P Capital IQ
<b>Ownership Variables</b>		
CEO_OWNP	CEO Ownership Percentage of shares owned by the CEO	S&P Capital IQ
DIR_OWNP	Director Ownership: percentage of shares owned by the managers/directors on the board	S&P Capital IQ
INST_OWNP	Institutional Ownership percentage of shares owned by the institutions	S&P Capital IQ
LA	Largest Shareholder: percentage of shares owned by the largest shareholder	S&P Capital IQ
LA5	Largest five Shareholders: aggregate percentage of shares owned by the largest five shareholders	S&P Capital IQ
<b>Control Variables</b>		
Log(TA)	Natural logarithm of total assets	S&P Capital IQ
VOL	Standard deviation of company's monthly stock price over the previous 12 months	S&P Capital IQ
VOL^2	Standard deviation of company's monthly stock price over the previous 12 months squared	S&P Capital IQ
Debt	Total liabilities(current and noncurrent) over total assets	S&P Capital IQ
PPETA	Property, plant and equipment divided by total assets	S&P Capital IQ
DUMMYCEO	Duality of CEO and Chairman: If CEO and Chairman are separate assign 1, otherwise 0	Annual Reports
INDEP	Independence: percentage of the number of non-executive directors over total board number	Annual reports
CASH/TA	Cash and cash equivalents divided by total assets	S&P Capital IQ
Log(LISTAGE)	Natural logarithm Number of years company is listed on the AIM	LSE statistics

**Table 9.2: Expected Signs**

<i>Dep. Var.</i>	<i>Director Ownership</i>	<i>Company Performance</i>
<b>Company Performance</b>	<b>TQ (+); ROA (+) MBV(+)</b>	
<b>Ownership Variables</b>		
CEO_OWNP		+
DIR_OWNP		+
INST_OWNP		+/-
LARGEST(LA)		+/-
LARGEST5(LA5)		+/-
<b>Control Variables</b>		
Log (TA)	-	+
VOL	+	-
VOL^2	-	+
CASH/TA	+	+
PPE/TA	+	-
DEBT	+	+
DUMMYCEO	+	+/-
INDEP	+	+
Log(LISTAGE)	+	+

## 9.5: Data and Sources

The data consists of a sample selected from the total number of companies listed on the LSE AIM market for the period 2008 to 2010. Companies with the market capitalisation of less than £1 million are removed from the analysis. This was done to keep the data set manageable (see Lang and Stulz (1994, 1256).who exclude firms that have less than \$100 million of assets from their data set for similar reason). From the resulting list, a maximum of three companies with the highest market capitalisation from each non-financial sub-sector in 2010 are selected. The selection of the companies across different industrial sectors ensures that the sample is a broad representation of the companies from across all the industrial classification. Specifically, given that a large part of AIM constitutes mining and oil companies, this selection procedure ensures that the results do not stem solely from these sectors. The resulting sample size further decreased for non-availability of data to calculate TQ, ownership higher than 100% and TQ greater than 13 (for reasons see page 167). The sample of companies was further subject to the following criteria: the companies must have complete one-year accounts for 2008; each company must exist in the three-year period from 2008 to 2010, therefore, excluding companies that were delisted or acquired during the sample period. The choice of length of the three year sample period is similar to that of Himmelberg *et al.* (1999, 360) who also use a

three year period. Other authors have included within their sample companies that were present in the first three years of their sample period, (for example, Himmelberg *et al.* 1999; Benson and Davidson III 2009).

Previous UK studies use annual reports to extract ownership data of their sample companies or hand-collect from the Price Waterhouse Corporate Register (December issues for each year). The Companies Act, post 1990 legislation, require companies to disclose, in their annual reports, the details of significant shareholders, who own 3% or more of the issued share capital. For this thesis, the yearly data on ownership percentage of shares held by three different groups that include the directors, institutional shareholders and other significant owners who are not on the board, and the financial data are obtained from S&P Capital IQ. The S&P Capital IQ collect ownership data for directors and institutional shareholders from announcements and, therefore, I was able to obtain information for ownership holdings that were less than the mandatory requirement of 3%. This allows data for more companies was available, in particular in relation to CEO ownership with less than 3% shareholdings. One of the problems with ownership data from this source was that there was double counting of shares under different ownerships and companies. Other authors using ownership data have found similar problems, for example, Bhagat and Jefferis (2005, 51) adjust the beneficial ownership data of directors and officers as a group, for double counting in the proxy statements. Dlugosz *et al.* (2006) using compact disclosure data provide examples of where errors can occur, for example, SEC requires in the proxy statements a list of all beneficial owners of more than 5% of the equity shareholdings. This caused shares to be double or triple counted under different individuals/groups. In addition, they found that the percentage shareholdings shown may not have correctly been separated between the percentage shareholdings of the equity shareholders and the preferred shareholders.

There is greater preference for vendor supplied data, for example, Kole (1995, 418) states that the advantages include the time saved compared to the time required to manually extracted ownership data from the original documents, low cost

of access and details of shareholder as low as 0.2 percent of the company's equity holding as at the year-end.

The data collection directly from annual reports has greater credibility than from third party databases. The major advantage of using data from S&P Capital IQ is time saving from manual collection of ownership data from the annual reports. Thus, despite the data been available for year-end and not the financial year-end, it was decided to use S&P Capital IQ data due to the extensive availability of details for different ownership groups. However, I used the annual reports of some of the companies to verify the significant ownership shareholdings, specifically names of the shareholders and to check for duplications.

### **Problems with the third party disclosure**

As noted above the ownership data obtained from S&P Capital IQ available at the end of the year. There were overlaps where two or more block holders are listed in the ownership table with the same shareholdings. The data also separated the ownership of directors from that of other large shareholders; however, there were no notes to suggest that shares of one individual be owned indirectly through a company, family or a trust. This may suggest that a higher number of shares are owned when a lower figure is the correct for the block holder. The lack of standardised source of data on large block holders is an impediment to this work and the reason as to why researchers have manually collected their data from annual reports or proxy statements. Dlugosz *et al.* (2006, 599) exemplify several problems for US companies ownership data obtained from Compact Disclosure (CD) database of Standard and Poor, for example, double or triple counting of shares under different people or entities.

## **9.6: Endogeneity of Ownership**

The empirical research on the relationship between ownership structure and company performance show conflicting results. Demsetz and Lehn (1985) support the endogeneity of a firm's ownership structure, which was originally argued for by Demsetz (1983). Himmelberg *et al.* (1999) use a fixed effect panel data set and instrumental variables to control for any unobserved heterogeneity. Using

instrumental variables to control for endogeneity their results show a quadratic form of the effect of ownership on performance. Holderness *et al.* (1999) confirm the endogeneity of ownership, and their results suggest that the determinants of ownership are company size, performance volatility, the square form of volatility, regulation and leverage. Demsetz and Villalonga (2001) argue that ignoring the endogeneity issues in a single equation model to estimate the ownership on performance incurs bias. Morck *et al.* (1988), Short and Keasey (1999) ignore the endogeneity issue altogether.

### **9.7: Hypothesis Development**

The theoretical research on managerial ownership and performance do not provide a consensus but explain the development of two theories. The first relates to '*convergence of interest*' and assumes a positive relationship between managerial ownership and company performance. The '*convergence of interest*' hypothesis suggests that the company's valuation augments as managers' shareholdings rise in the companies they manage.

In contrast, the '*entrenchment hypothesis*' predicts a negative relationship between managerial ownership and company performance. Thus, when managerial equity holding is low the external market discipline will contain the managers' opportunistic behaviour in favour of maximisation of profits. However, higher levels of managerial shareholdings could lead to '*entrenchment*', which will adversely affect company performance. Hermalin and Weisbach (1988) explains managerial entrenchment as when managers use their power to further their own interest rather than the interests of the shareholders. Shleifer and Vishny (1989, 123) provide examples of entrenchment when managers make specific investments (reducing manager replacement), extract higher wages and larger perquisites from the shareholders. Short and Keasey (1999, 79) give it a very short definition as '*pursuing self-interest*'. The entrenchment hypothesis suggests that as management increase their ownership shareholdings and external market discipline may be ineffective against large managerial ownership shareholdings.

## **Determinants of Ownership**

Of the possible explanatory variables affecting ownership structure, using prior research, the three variables that need investigation in this thesis are company performance, company size and volatility.

### **Hypothesis 1**

Demsetz and Lehn (1985, 1174) argue that the disadvantage of diffused ownership is that ownership structure has the potential to allow managers to benefit by serving their own self-interests. Therefore, increasing the managerial ownership ought to align the interests of the managers and the shareholders and hence improve performance. Therefore, there should be a positive relationship between the increase in managerial ownership and company performance, thereby increasing shareholder value.

*Hypothesis 1: If director equity shareholdings are increased, it has a positive influence on company performance.*

### **Hypothesis 2**

Holderness (2009, 1391) provide two reasons for volatility affecting ownership concentration. First, due to managerial risk aversion and as (Himmelberg *et al.* 1999) suggests that the diversification by a large shareholder be poor if they concentrate all their shareholdings in a single block. Hence, this would result in lower levels of ownership as volatility increases. Secondly, in contrast to Himmelberg *et al.* (1999), Demsetz and Lehn (1985) suggest that the managerial performance is difficult to monitor when companies operate in a noisy environment and, therefore, require higher payoffs to owners in maintaining tighter control. Hence, with noisier environments one would see more concentrated ownership structures. In addition to linearly estimating ownership concentration as a function of volatility, hypothesis 2 also estimates this relationship as a non-linear form by including the squared value of the volatility variable. Following Core and Larcker (2002, 327) in using the standard deviation of stock return volatility as a proxy for

noise. The concave relationship is captured by using the squared value of the volatility. Hence, at higher values of the volatility variable the increase in the concentration of ownership with given increase in volatility will weaken. The prediction is a positive-negative relationship with VOL and VOL<sup>2</sup>, respectively.

***Hypothesis 2: The relationship between equity ownership shareholdings and company volatility is non-linear.***

## **Determinants of Performance**

### **Hypothesis 3**

The third hypothesis predicts that there is a linear relationship between company performance and director ownership. Most of the early studies on the relationship between performance and ownership were linear in form (see, for example, Demsetz and Lehn, 1985; Loderer and Martin, 1997, 235).

***Hypothesis 3: If company performance increases, then it has a positive influence on the director ownership shareholdings.***

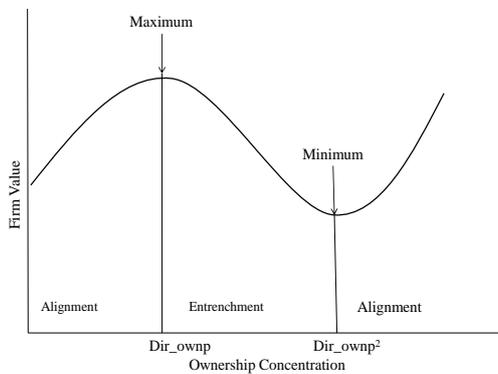
### **Hypothesis 4**

The fourth hypothesis examined here is that the performance of companies is non-linearly associated with the percentage of shareholdings held by directors. Following the results of Morck *et al.* (1988); McConnell and Servaes (1990); Kole (1995); Short and Keasey (1999), Morck *et al.* (1988, 299) study uses pre-determined ownership levels at 5% and 25%. The 5% because of the Securities and Exchange Commission's mandatory disclosure requirement for the US listed companies. The 25% cut off motivated by Weston (1979, cited in Morck *et al.* 1988) who suggests that beyond 20-30% ownership holdings it is less likely for a hostile bid to be successful. Others, for example, Von Lilienfeld-Toal and Ruenzi (2014) use 5%, 10% and 20% of all outstanding shares owned by the management as fixed cut-offs, but their study is different as they use these ownership shareholdings to develop portfolios to test for abnormal returns. Since, there is no theoretical evidence

for using the specific ownership percentages, this thesis follows that of Short and Keasey (1999) and uses the square and cubic forms of managerial ownership holdings to determine the turning points.

Therefore, as Short and Keasey suggest the variables  $DIR\_OWNP$  and its cubic form,  $DIR\_OWNP^3$ , is expected to be positive in line with the convergence of interest with a positive effect on the company performance at both lower and higher levels of managerial ownership. The coefficient for the  $DIR\_OWNP^2$  is expected to be negative indicating entrenchment. Therefore, company value should increase with low ownership concentration levels at low and high levels (due to the alignment-of-interest effect) and decrease with insider ownership at in-between levels (because of the managerial entrenchment). Hypothesis 4 implies that  $DIR\_OWNP$  is a maximum and  $DIR\_OWNP^2$  is a minimum (see Figure 9.1). Hypothesis 4 tests for the AIM companies the relationship between the performance of companies and director ownership is cubic in form.

**Figure 9.1: Company Value and Director Ownership Shareholdings**



Source: adapted from de Miguel, 2004

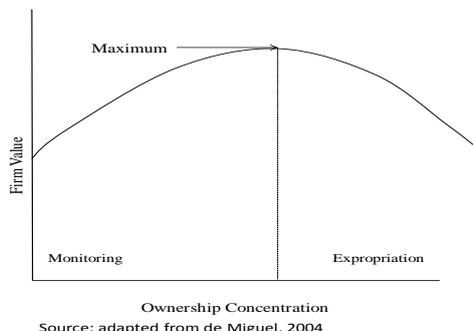
***Hypothesis 4: Company performance increases with director ownership at low and high levels, due to the convergence of interest, and decreases with director ownership at intermediate levels, due to the managerial entrenchment.***

## Hypothesis 5

Increasing ownership will result in positive performance, which is consistent with the monitoring hypothesis (De Miguel *et al.* 2004). However, concentrated ownership by the largest shareholder may result in poor performance, due to expropriation by the largest shareholder. The two competing theories suggest that company performance is a quadratic function of the largest shareholder's ownership. The coefficients of  $LA$  and  $LA^2$  will be positive and negative, respectively. The quadratic relation proposed in hypothesis 5 presents a single turning point and implies that ownership concentration is at a maximum (see Figure 9.2) and the coefficients for  $LA$  and  $LA^2$  will have opposite signs – a positive with lower levels of ownership concentration and negative with higher levels, respectively. The  $LA$  may or may not include directors.

*Hypothesis 5: Company performance increases with largest ownership shareholdings at low levels, due to monitoring effect, and decreases with higher levels of largest ownership shareholdings, due to expropriation effect.*

**Figure 9.2: Company Value With Increasing Ownership Concentration**



## 9.8: Empirical Results

The descriptive statistics from Table 9.3, Panel A, depicts that the mean, medium and the maximum for largest five shareholders (LA5) are similar to the cumulative shareholdings of the institutional ownership. This suggests that the dominant or the major shareholders are the institutional investors. Further, the maximum percentage of shares held by the CEO, cumulative board director

ownership, the largest shareholder stands at 83%, and one conclusion is that the majority shareholders are board members. Table 9.3 Panel B, shows the comparison of aggregated director ownership over the three years. The results show that there is very little variation in the mean value of the director ownership holdings; however, the maximum has dropped from 83% to 74.8% in 2009 and to 74.4% in 2010.

**Table 9.3: Descriptive Statistics**

<b>Panel A Variables used for the LSE AIM for the period 2008 to 2010</b>						
<b>Variables</b>	<b>Mean</b>	<b>Median</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Std. Dev</b>	<b>Observations</b>
<b>Company Performance Variables</b>						
TQ	1.73	1.18	10.72	0.32	1.40	391
ROA	-3.02	3.38	75.06	-390.02	30.29	391
MBV	2.24	1.34	153.82	-81.96	9.27	389
<b>Ownership Variables</b>						
CEO_OWNP	7.37	1.11	83.10	0.00	14.68	379
DIR_OWNP	15.69	9.83	83.10	0.00	17.87	385
INST_OWNP	43.45	44.85	93.46	0.00	22.66	391
LARGEST(LA)	21.86	15.38	83.10	0.00	16.78	391
LARGEST5(LA5)	45.74	43.49	89.16	0.00	18.81	391
<b>Control Variables</b>						
TA	129.25	62.93	1,248.47	3.08	179.21	391
VOL	0.16	0.13	3.69	0.02	0.21	390
VOL^2	0.07	0.02	13.58	0.00	0.70	390
CASH/TA	0.21	0.14	0.96	0.00	0.22	391
PPE/TA	0.23	0.16	0.96	0.00	0.25	388
DEBT	0.40	0.37	1.58	0.00	0.24	391
DUMMYCEO	0.83	1.00	1.00	0.00	0.38	388
INDEP	51.98	50.00	100.00	0.00	16.16	385
LISTAGE	6.05	5.00	16.00	2.00	2.91	391
<b>Panel B Descriptive variables for Dir_ownp for each of the 3 years</b>						
	<b>Mean</b>	<b>Median</b>	<b>Maximum</b>	<b>Minimum</b>	<b>Std. Dev</b>	<b>Observations</b>
2008	16.17	9.91	83.10	0.00	18.53	130
2009	15.76	10.65	73.77	0.00	17.61	129
2010	15.11	7.94	73.44	0.00	17.56	126

Table 9.4 shows a comparison of the levels of managerial ownership reported by previous researchers. Comparisons of managerial ownership levels in previous studies show a wide range across the mean and median values depending on the country and the stock market used. For example, the director ownership mean for AIM is 15.8%, and median is 9.8% compared to Short *et al.* (1999) who use UK data for the year 1992 find that both the mean and median are lower at 11.5% and 4.1%,

respectively. Morck *et al.* (1988) use a 1980 sample for US companies report much lower figures for the mean and median, 10.6% and 3.4%, respectively. However, in comparison to Drakos and Bekiris (2010) who use a sample of companies listed on the Athens Stock Exchange report much higher mean and median figures, 38.7% and 41.6%, respectively.

**Table 9.4: Comparison of Descriptive Statistics for Managerial Ownership**

	<b>This study</b>	<b>Short and Keasey (1999)</b>	<b>Morck <i>et al.</i> (1988)</b>	<b>Drakos and Bekiris (2010)</b>
Period/Year	2008-2010	1992	1980	2000-2004
Country/Market	UK (AIM)	UK (Main)	USA (Fortune 500)	Athens Stock Exchange
Mean	15.79	11.50	10.60	38.70
Median	9.77	4.10	3.40	41.60
Maximum	83.10	75.30		92.70
Minimum	0.00	0.00		0.00
Std. Dev.	17.79	15.50		27.84

Table 9.5 shows the correlation between the variables and supports the claim that the regressions are not affected by multi-collinearity. However, in Table 9.5, correlation greater than 0.7 is between LA and LA5 but these variables do not appear in the same regression, so the strong correlation does not matter. Table 9.5 shows that CEO\_OWNP and DIR\_OWNP correlate negatively with INST\_OWNP (0.35 and 0.52, respectively). This is as expected since one would expect that inside owners will sell their shares for various reasons and mainly the institutional shareholders will purchase these shares. The CEO\_OWNP and DIR\_OWNP correlate positively with the LARGEST and the LARGEST5 shareholders, but not so much to qualify that these measures may be redundant if the other is used. Demsetz and Villalonga (2001, 215) find that the correlation between the five largest shareholders and the management is positive, but has a moderate correlation. Hence, they suggest, with all else equal, a study that uses both measures together would provide a more accurate picture of the ownership-performance relationship.

**Table 9.5: Correlation Matrix**

Three-year period 2008 to 2010 for AIM sample of companies. Included observations: 391 after adjustments. Pairwise samples

	CEO_OWNP	DIR_OWNP	INST_OWNP	LARGEST	LARGEST5	TQ	ROA	MBV	LOG(TA)	VOL	VOL^2	DEBT	PPE/TA	DUMMYCEO	INDEP	CASH/TA	LOG(LISTAGE)	
CEO_OWNP	1																	
DIR_OWNP	0.62	1																
INST_OWNP	-0.35	-0.52	1															
LARGEST (LA)	0.46	0.44	0.17	1														
LARGEST5(LA5)	0.35	0.39	0.39	0.83	1													
TQ	-0.06	-0.12	0.13	-0.06	-0.03	1												
ROA	-0.04	0.14	-0.04	0.09	0.09	-0.13	1											
MBV	-0.04	-0.05	0.07	-0.02	-0.01	0.19	0.04	1										
LOG(TA)	0.01	-0.05	0.1	0.09	0.05	-0.32	0.27	-0.04	1									
VOL	-0.05	-0.1	-0.02	-0.06	-0.08	0.21	-0.21	0.04	-0.11	1								
VOL^2	-0.03	-0.05	-0.05	-0.05	-0.07	0.19	-0.06	0.03	-0.08	0.91	1							
DEBT	0.04	0.02	0.05	0.1	0.05	-0.19	-0.06	0.01	0.34	-0.08	-0.08	1						
PPE/TA	0.12	0.07	0.01	0.09	0.08	-0.18	0.09	-0.04	0.26	-0.09	-0.06	0.16	1					
DUMMYCEO	-0.38	-0.17	0.02	-0.22	-0.19	-0.04	0.06	0.01	-0.08	0	0.01	0.02	-0.15	1				
INDEP	-0.13	-0.24	0.14	0	0	0.02	-0.21	0.02	0.09	0.04	0.02	-0.01	0.13	-0.1	1			
CASH/TA	0.01	0.1	-0.06	-0.03	0.03	0.46	-0.24	0.05	-0.34	0.14	0.1	-0.37	-0.39	-0.02	0.08	1		
LOG(LISTAGE)	0	-0.04	0.02	-0.01	-0.04	0.1	0.1	0.03	-0.1	-0.03	-0.01	-0.06	0.03	-0.1	-0.08	-0.11	1	

This section focuses to explain the level of ownership shareholdings and relationship with company performance and company specific control variables. Table 9.2 shows the definition of each variable used in this chapter. To summarise, Equations 9.1 and 9.2 allows studying ownership determinants for the AIM companies. The models use the following forms:

### Equation 9.1

$$OWNERSHIP = \alpha_0 + \beta_1 TQ + \beta_2 \text{LOG}(TA) + \beta_3 \text{PPE}/TA + \beta_4 \text{DEBT} + \beta_5 \text{VOL} + \beta_6 \text{CASH}/TA + \beta_7 \text{DUMMYCEO} + \beta_8 \text{INDEP} + \beta_9 \text{LOG}(\text{LISTAGE}) + \varepsilon \quad (1)$$

### Equation 9.2

$$OWNERSHIP = \alpha_0 + \beta_1 TQ + \beta_2 \text{LOG}(TA) + \beta_3 \text{PPE}/TA + \beta_4 \text{DEBT} + \beta_5 \text{VOL} + \beta_6 \text{VOL}^2 + \beta_7 \text{CASH}/TA + \beta_8 \text{DUMMYCEO} + \beta_9 \text{INDEP} + \beta_{10} \text{LOG}(\text{LISTAGE}) + \varepsilon \quad (2)$$

### Equation 9.3

$$PERFORMANCE = \alpha_0 + \beta_1 \text{DIR\_OWNP} + \beta_2 \text{INST\_OWNP} + \beta_3 \text{LOG}(TA) + \beta_4 \text{PPE}/TA + \beta_5 \text{DEBT} + \beta_6 \text{VOL} + \beta_7 \text{CASH}/TA + \beta_8 \text{DUMMYCEO} + \beta_9 \text{INDEP} + \beta_{10} \text{LOG}(\text{LISTAGE}) + \varepsilon \quad (3)$$

### Equation 9.4

$$PERFORMANCE = \alpha_0 + \beta_1 \text{DIR\_OWNP} + \beta_2 \text{DIR\_OWNP}^2 + \beta_3 \text{DIR\_OWNP}^3 + \beta_4 \text{INST\_OWNP} + \beta_5 \text{LOG}(TA) + \beta_6 \text{PPE}/TA + \beta_7 \text{DEBT} + \beta_8 \text{VOL} + \beta_9 \text{CASH}/TA + \beta_{10} \text{DUMMYCEO} + \beta_{11} \text{INDEP} + \beta_{12} \text{LOG}(\text{LISTAGE}) + \varepsilon \quad (4)$$

### Equation 9.5

$$PERFORMANCE = \alpha_0 + \beta_1 \text{LA} + \beta_2 \text{LA}^2 + \beta_3 \text{LOG}(TA) + \beta_4 \text{PPE}/TA + \beta_5 \text{DEBT} + \beta_6 \text{VOL} + \beta_7 \text{CASH}/TA + \beta_8 \text{DUMMYCEO} + \beta_9 \text{INDEP} + \beta_{10} \text{LOG}(\text{LISTAGE}) + \varepsilon \quad (5)$$

## Ownership shareholdings regression on TQ

Table 9.6 reports the results of the determinants of director ownership shareholdings defined by Equation 9.1. For robustness, the dependent variable includes different measures of ownership shareholdings of CEO\_OWNP, INST\_OWNP, LA and LA5. Each of the specification includes the same control

variables as per Equation 9.1. Panel A shows the regression results without company fixed-effects and Panel B shows the regression results with company fixed effect. Demsetz and Lehn (1985); (Himmelberg *et al.* 1999) control for industries, but this study does not control specifically for industries as the sample includes companies from all non-financial sectors on the AIM.

Table 9.6 Panel A, without fixed-effects shows a negative association between the CEO\_OWNP and the variables TQ, VOL, DUMMYCEO and INDEP and statistically significant at 5%. CEO\_OWNP has a positive association with PPE/TA and CASH/TA and statistically significant at 5%. There is no association with LOG (TA), DEBT and LOG (LISTAGE).

Panel A, without fixed-effects shows a negative association between DIR\_OWNP and the variables TQ, LOG (TA), DUMMYCEO, INDEP and LOG (LISTAGE) and statistically significant at 5%. DIR\_OWNP has a positive association with PPE/TA, DEBT and CASH/TA and statistically significant at 5%. The association between the variables DIR\_OWNP and VOL is weak at the 10% significance level.

Panel A, without fixed-effects shows a negative association between the INST\_OWNP and the variables DEBT and CASH/TA and statistically significant at 5%. INST\_OWNP shows a positive association with TQ, LOG (TA) and INDEP and significant at 5%. With VOL, it is weakly associated at 10% significance level. The positive TQ results show that INST\_OWNP are complementary to that of DIR\_OWNP.

Panel A, without fixed-effects shows a negative association between the dependent variable LA is and DUMMYCEO and INDEP and statistically significant at 5%. LA has a positive association with LOG (TA), PPE/TA, DEBT, CASH/TA and INDEP and significant at 5%. With VOL, it is weakly associated at 10% significance level. LA only explains 8% of the variance.

Panel A, without fixed-effects shows a negative association between the LA5 dependent variable and DUMMYCEO and statistically significant at 5%. LA5 has a positive association with PPE/TA and CASH/TA and statistically significant at 5%. LA5 only explains 8% of the variance.

The expectation was that company performance would increase with the increase in equity ownership; however, the results suggest that with the increase in the equity ownership is associated with a decrease in TQ for all the dependent variables except the INST\_OWNP. This evidence contradicts the interpretation of agency theory that higher managerial ownership increases shareholder wealth and aligns the interests of the principal and the agents. The positive association between INST\_OWNP and TQ suggests that institutional investors are investing in companies with high returns or influencing the management to make better decisions. The positive association between INST\_OWNP and log (TA) suggests that the former have higher investment in larger companies and owners are selling their stake to realise their investment, or they need the finance to expand.

Table 9.6 Panel B, inclusion of fixed-effects, shows an association between the CEO\_OWNP and TQ, but DIR\_OWNP and INST\_OWNP drop out. Controlling for firm fixed-effects the results show that increasing managerial ownership may affect performance. Short and Keasey (1999, 94) find that institutional and large shareholders do not support an independent effect on the performance of the companies. So find that both variables have a positive coefficient but statistically insignificant. In this analysis, institutional and the largest shareholder have a negative and positive coefficients, respectively and statistically insignificant. The findings that institutional ownership have no effect on company performance is contrary to that of the findings of McConnell and Servaes (1990) who report a positive coefficient and statistically significant. Although there is no statistical significance with the institutional shareholder, but the direction of the coefficient is as expected, due to complementariness.

Panel B, inclusion of fixed-effects, there is no association between CEO\_OWNP and LOG (TA). There are several reasons to explain this. First, the CEOs are new and recruited externally and, therefore, have little or no shareholdings. Second, the CEOs may have sold their shares to outsiders to realise their cash. With the DIR\_OWNP, LA and LA5 ownerships, the shareholdings decrease with an increase in company size. Hence, as the company size increases, and the companies need to expand, the shares are sold to outsiders, may be to the institutional shareholder, and hence the institutional shareholding increase with an increase in company size. There is a good association between ownership and PPE/TA; however, the coefficients for institutional, LA and LA5 are negative. Increasing investment in PPE/TA suggests that the CEO and directors are unwilling to reduce their shareholdings because increasing the investment in the capital expenditure suggests that the company is growing, and there is potential for higher value of the share price in the future. Ownership variables and DEBT has a negative coefficient but is not statistically significant. LA5 show a weak positive association with VOL. LA5 and CASH/TA shows a positive coefficient and statistically significant at 5%.

The governance variable, DUMMYCEO, has a negative coefficient and statistically significant with CEO ownership holdings. A score of zero does not matter since the coefficient is negative. It is predicting that if CEO and chairman roles are combined there should be higher ownership (i.e. coefficient should be positive). The results for director and the largest shareholder ownership are similar since CEO is part of director ownership and in these companies where the CEO and chairman are the same individual and therefore likely that the largest shareholder is the same person.

INDEP is only statistically significant with director ownership holdings. A key factor to notice is that the association of DUMMYCEO with ownership. Since the coefficient is negative, it suggests that the score of zero, that is, when the same individual holds the CEO and chairman roles, does not matter. Comparing the

duality role of the CEO and chairman suggests that the separation of the roles results in a drop, in the ownership.

Finally, ownership shows relationship with LOG (LISTAGE). However, the direction varies depending on the measure of ownership.

The regression in Equation 9.1 was re-run using ROA as the firm performance. The following results show: DIR\_OWNP, LA and LA5 the coefficients were positive and statistically significant, whereas CEO\_OWNP and INST\_OWNP showed no significant association with ROA.

**Table 9.6: Ownership Shareholdings Regression on TQ**

$$OWNERSHIP = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 PPE / TA + \beta_4 DEBT + \beta_5 VOL + \beta_6 CASH / TA + \beta_7 DUMMYCEO + \beta_8 INDEP + \beta_9 LOG( LISTAGE ) + \varepsilon$$

Equation 9.1

White cross-section standard errors and covariance (d.f. corrected); Method: Ordinary least squares

Dep. Var:	Panel A: no Fixed -Effects					Panel B : With Fixed -Effects				
	CEO_ OWNP	DIR_ OWNP	INST_ OWNP	LA	LA5	CEO_ OWNP	DIR_ OWNP	INST_ OWNP	LA	LA5
C	30.84 [20.89]**	45.17 [30.13]**	18.03 [3.52]**	26.85 [11.76]**	55.57 [7.57]**	24.00 [9.01]**	35.52 [39.14]**	29.16 [4.24]**	37.06 [5.96]**	64.82 [7.23]**
TQ	-1.24 [-4.54]**	-2.87 [-6.74]**	3.79 [14.30]**	-0.89 [-1.52]	-0.98 [-1.55]	-0.22 [-3.25]**	-0.15 [-1.84]	-0.09 [-0.38]	0.12 [0.62]	-0.52 [-2.37]*
LOG(TA)	-0.64 [-1.59]	-1.17 [-5.99]**	3.25 [8.70]**	0.81 [2.86]**	0.83 [1.82]	0.08 [0.21]	-2.58 [-8.42]**	1.56 [1.98]*	-2.43 [-2.78]**	-5.71 [-14.59]**
PPE/TA	6.87 [29.01]**	10.62 [4.62]**	-6.35 [-1.72]	3.72 [4.68]**	5.67 [63.10]**	2.70 [3.80]**	6.33 [7.19]**	-12.49 [-9.21]**	-6.50 [-2.42]*	-15.40 [-33.38]**
DEBT	4.52 [1.59]	4.98 [5.34]**	-3.24 [-2.67]**	5.32 [5.54]**	2.69 [1.28]	-4.29 [-1.70]	-1.17 [-1.68]	-4.07 [-1.32]	-2.19 [-0.85]	-0.72 [-0.51]
VOL	-2.13 [-85.39]**	-6.12 [-1.99]*	-4.90 [-2.14]*	-2.73 [-1.76]	-5.01 [-2.45]*	0.11 [0.64]	-0.45 [-0.58]	-1.22 [-1.69]	-0.60 [-0.68]	1.47 [2.38]*
CASH/TA	9.14 [4.99]**	23.19 [6.34]**	-16.69 [-4.66]**	5.26 [3.04]**	10.49 [15.21]**	-2.76 [-1.27]	-0.20 [-0.29]	1.41 [0.22]	-0.80 [-0.32]	-6.10 [-3.48]**
DUMMYCEO	-16.12 [-26.21]**	-9.66 [-11.92]**	2.79 [1.68]	-10.71 [-7.91]**	-11.28 [-6.46]**	-9.11 [-81.95]**	-2.87 [-3.88]**	-7.99 [-1.35]	-7.78 [-8.24]**	-8.62 [-1.95]
INDEP	-0.18 [-16.80]**	-0.33 [-12.32]**	0.20 [5.23]**	-0.03 [-3.10]**	-0.07 [-1.30]	-0.02 [-0.97]	-0.10 [-2.65]**	-0.04 [-0.33]	-0.02 [-0.45]	0.05 [0.82]
LOG(LISTAGE)	-0.42 [-0.98]	-1.52 [-4.92]**	0.02 [0.01]	0.09 [0.16]	-1.47 [-0.82]	-3.56 [-10.09]**	-1.03 [-11.80]**	12.48 [20.39]**	3.04 [8.70]**	9.05 [7.45]**
Observations:	366	372	378	378	378	366	372	378	378	378
R-squared:	0.21	0.18	0.08	0.08	0.08	0.94	0.97	0.86	0.92	0.83

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

## Ownership and company volatility

Table 9.7 shows results for Equation 9.2. The regression of CEO and director ownership on volatility, in Panel A, shows a non-linear relationship, negative – positive, for VOL and VOL squared, respectively. Both the coefficients are statistically significant, at 10% for CEO\_OWNP and 5% for DIR\_OWNP. In comparison to Table 9.6, the difference in variance is almost negligible. With the inclusion of fixed -effects, the statistical significance disappears.

With the institutional shareholders as the dependent variable, Table 9.7, in Panel A the coefficients for VOL and VOL square are positive and negative, respectively, and statistically significant at 10% and 5% levels, respectively. However, with the inclusion of fixed-effects the significance disappears, in Panel B. The direction of the coefficients is as expected due to complementariness between the director ownership and institutional ownership. For example, in older companies it is less likely that the founders are still holding large amounts of shareholdings and institutional owners replace the director or CEO shareholdings. Table 9.7, Panel A shows no association with VOL and VOL-squared for the LA and LA5. However, Demsetz and Lehn (1985) use LA5 as the dependent variable, find that the linear estimation of the ownership concentration as a function of volatility gives a positive coefficient, and a negative coefficient with the square form. In both cases, they are statistically significant. Therefore, at higher levels of volatility variable has a diminishing effect on the ownership concentration. Although Demsetz and Lehn do not use the fixed-effects, they do control for three industrial sectors. These results are similar to Himmelberg *et al.* (1999, 372). Holderness (2009, 1391) suggests that large shareholders may be under-diversified, and the optimal level of block ownership should decline as volatility increases.

With the inclusion of fixed-effects, the CEO\_OWNP, DIR\_OWNP and INST\_OWNP and their square forms are no longer significant. However, only LA5 shows a weak association with VOL and VOL square and the direction of the coefficient changing from positive to negative. The fixed-effects can be explained by taking each company's observations and doing the regression of just those

observations for each individual company, where the regression is correcting for differences in each company from period to period. Hence, the heterogeneity of each company is different and some variables show variations in the ownership structure not explained by the different companies. That is, unobserved heterogeneity can explain the large fraction of the cross-sectional variation in the ownership. For example, it is questionable as to why CEO \_OWNP with the fixed-effects has a lower ownership in comparison to the coefficient in Panel A that excludes fixed-effects.

The regressions have been run without fixed effects and with inclusion of fixed effects correcting for heterogeneity across the companies in the sample. The ownership variable is likely to be stable for each company in different periods, whereas across the companies is going to be different. A likely explanation for heterogeneity of ownership for this sample is that some variations are still providing as a prediction part, but it is possible that there will be collinearity between the variables.

**Table 9.7: Ownership Shareholdings Regression on Company Volatility**

$$OWNERSHIP = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 PPE/TA + \beta_4 DEBT + \beta_5 VOL + \beta_6 VOL^2 + \beta_7 CASH/TA + \beta_8 DUMMYCEO + \beta_9 INDEP + \beta_{10} LOG(LISTAGE) + \varepsilon$$

Equation 9.2

Dep. Var:	Panel A: Without Fixed-Effects					Panel B: With Fixed-Effects				
	CEO_OWNP	DIR_OWNP	INST_OWNP	LA	LA5	CEO_OWNP	DIR_OWNP	INST_OWNP	LA	LA5
C	32.07 [14.91]**	48.04 [30.33]**	15.11 [3.27]**	27.11 [10.98]**	55.40 [8.56]**	24.57 [6.74]**	37.22 [20.57]**	26.45 [2.52]*	36.46 [5.08]**	60.25 [7.87]**
TQ	-1.25 [-4.30]**	-2.88 [-6.34]**	3.81 [14.41]**	-0.89 [-1.51]	-0.98 [-1.56]	-0.22 [-3.13]**	-0.15 [-1.62]	-0.09 [-0.32]	0.12 [0.61]	-0.52 [-1.91]
LOG(TA)	-0.67 [-1.61]	-1.25 [-6.28]**	3.34 [9.05]**	0.80 [3.18]**	0.83 [1.97]*	0.03 [0.07]	-2.70 [-7.75]**	1.75 [1.73]	-2.38 [-2.45]*	-5.39 [-8.77]**
PPE/TA	6.71 [33.60]**	10.26 [4.90]**	-5.98 [-1.73]	3.69 [4.06]**	5.69 [60.21]**	2.54 [5.67]**	5.87 [8.64]**	-11.65 [-5.17]**	-6.31 [-2.67]**	-13.98 [-18.42]**
DEBT	4.65 [1.70]	5.35 [7.94]**	-3.58 [-4.05]**	5.35 [5.16]**	2.67 [1.19]	-4.21 [-1.69]	-0.92 [-1.07]	-4.46 [-1.23]	-2.28 [-0.89]	-1.38 [-1.26]
VOL	-9.89 [-2.23]*	-25.41 [-3.89]**	14.23 [2.22]*	-4.41 [-0.58]	-3.87 [-0.45]	-1.04 [-0.38]	-4.25 [-0.96]	4.72 [0.48]	0.72 [0.23]	11.46 [2.16]*
VOL^2	2.54 [2.12]*	6.34 [3.52]**	-6.29 [-3.58]**	0.55 [0.28]	-0.37 [-0.17]	0.36 [0.45]	1.18 [0.99]	-1.84 [-0.64]	-0.41 [-0.60]	-3.10 [-2.37]*
CASH/TA	9.29 [4.96]**	23.52 [6.38]**	-17.00 [-4.91]**	5.29 [2.96]**	10.47 [15.97]**	-2.89 [-1.43]	-0.61 [-1.14]	2.06 [0.37]	-0.65 [-0.29]	-5.01 [-3.29]**
DUMMYCEO	-16.22 [-33.19]**	-9.86 [-9.45]**	3.00 [1.98]*	-10.72 [-7.72]**	-11.26 [-6.68]**	-9.22 [-26.15]**	-3.15 [-3.06]**	-7.57 [-1.13]	-7.69 [-6.92]**	-7.91 [-1.79]
INDEP	-0.18 [-15.44]**	-0.32 [-14.00]**	0.19 [4.25]**	-0.03 [-2.76]**	-0.07 [-1.23]	-0.02 [-0.94]	-0.10 [-2.53]*	-0.03 [-0.30]	-0.02 [-0.43]	0.06 [0.85]
LOG(LISTAGE)	-0.47 [-1.34]	-1.65 [-3.72]**	0.16 [0.08]	0.08 [0.13]	-1.46 [-0.82]	-3.61 [-11.10]**	-1.17 [-5.33]**	12.73 [21.33]**	3.09 [8.33]**	9.47 [10.98]**
Observations:	366	372	378	378	378	366	372	378	378	378
R-squared:	0.21	0.19	0.08	0.08	0.08	0.94	0.97	0.86	0.92	0.83

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

### **Linear relationship between company performance and director ownership**

Table 9.8, presents the results of equation 9.3 where performance is the dependent variable and the key independent variable are director ownership. Panel A, without firm fixed-effect, shows that for every 1% increase in director ownership there is a drop in TQ ratio by 0.0073 points, but is moderately significant. The negative relationship between performance and director ownership is in contrast to what the theory suggests, as the expectation was to have a positive coefficient to reflect the increase in company value from savings by reducing the monitoring costs by outside shareholders. With institutional investors, the coefficient is positive and statistically significant. The LOG (TA), DEBT, VOL, CASH/TA and DUMMYCEO control variables are statistically significant at the 5% level.

Panel A, shows that the regression of ROA on DIR\_OWNP gives a positive coefficient and statistically significant. The positive relation between the accounting measure of profit and director ownership suggests that managers increase their shareholdings in companies that are profitable. With ROA and institutional investor, the coefficient is positive but not significant. These results are similar to those of Short and Keasey (1999) that coefficients on the variable INST\_OWNP is positive but statistically insignificant. The finding that company performance has no association with institutional ownership contrasts with that of McConnell and Servaes (1990) who find a statistically significant and positive relationship between the two variables.

Table 9.8, Panel B, shows the results with firm-fixed-effects. The relationship with TQ and DIR\_OWNP is negative and statistically insignificant. ROA has a positive coefficient and significant. ROA shows a linear relationship with director ownership. With institutional investors, the coefficient is negative and statistically insignificant.

An explanation of the contrasting results with different performance variable is due to the difference measures that each variable is measuring, TQ measures

growth opportunities and directors may be holding onto shares for the long-term gain.

In general, the estimated regressions explain 32% to 26% of the variation in the dependent variables, TQ and ROA, respectively. However, the R-squared with MBV is very low at 1%, and I feel that the MBV measure in this chapter is a suspect.

**Table 9.8: Performance Regression On Ownership Shareholdings- Linear Model**

$$PERFORMANCE = \alpha_0 + \beta_1 DIR\_OWNP + \beta_2 INST\_OWNP + \beta_3 LOG(TA) + \beta_4 PPE/TA + \beta_5 DEBT + \beta_6 VOL + \beta_7 CASH/TA + \beta_8 DUMMYCEO + \beta_9 INDEP + \beta_{10} LOG(LISTAGE) + \varepsilon$$

Equation 9.3

White cross-section standard errors and covariance (d.f. corrected). Method: Ordinary least squares

Dep. Var:	Panel A: no Fixed-Effects			Panel B: with Fixed-Effects		
	TQ	ROA	MBV	TQ	ROA	MBV
C	1.45 [4.17]**	-22.61 [-3.56]**	-1.32 [-0.60]	-0.50 [-0.57]	-38.45 [-3.41]**	-13.43 [-5.58]**
DIR_OWNP	-0.01 [-46.51]**	0.29 [10.48]**	-0.01 [-0.53]	-0.01 [-1.27]	0.99 [5.89]**	-0.04 [-0.75]
INST_OWNP	0.01 [3.97]**	0.03 [0.81]	0.03 [1.73]	-0.00 [-0.72]	-0.06 [-0.46]	0.02 [1.60]
LOG(TA)	-0.23 [-18.16]**	8.91 [4.28]**	-0.20 [-0.31]	0.13 [0.49]	22.49 [5.77]**	0.88 [1.11]
PPE/TA	0.30 [1.08]	-2.31 [-0.97]	-0.64 [-0.41]	-0.29 [-0.64]	-12.68 [-1.21]	1.73 [0.96]
DEBT	0.29 [3.85]**	-35.13 [-1.48]	1.61 [0.24]	1.23 [3.21]**	-91.79 [-8.66]**	-0.86 [-0.18]
VOL	0.89 [3.92]**	-19.13 [-2.37]*	1.53 [3.30]**	1.08 [6.75]**	1.62 [0.32]	2.95 [3.14]**
CASH/TA	2.91 [11.58]**	-29.96 [-2.09]*	2.31 [6.88]**	3.23 [12.04]**	18.44 [1.35]	7.34 [2.78]**
DUMMYCEO	-0.28 [-3.16]**	10.45 [4.27]**	0.24 [1.59]	-0.20 [-1.50]	-4.38 [-1.20]	0.19 [0.61]
INDEP	-0.01 [-5.79]**	-0.32 [-6.64]**	0.01 [0.69]	-0.02 [-3.21]**	-0.19 [-2.13]*	0.07 [1.56]
LOG(LISTAGE)	0.38 [2.54]*	5.06 [3.29]**	0.79 [0.64]	0.91 [57.69]**	-13.64 [-3.15]**	3.51 [1.05]
Observations:	372	372	370	372	372	370
R-squared:	0.32	0.26	0.01	0.75	0.87	0.10
F-statistic:	16.73	12.95	0.46	5.23	11.84	0.20

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

### Cubic relationship between company performance and director ownership

Table 9.9, Panel A (without company fixed-effects), presents the results of the hypothesis that the relationship between the company performance and managerial ownership is cubic (Equation 9.4). In terms of the TQ, the OLS regression results provide the positive – negative – positive signs as expected. Both DIR\_OWNP and its cubic form give a positive coefficient, but are statistically insignificant (similar to Morck *et al.* (1988) who find that at higher levels of managerial ownership the coefficient is positive but insignificant). The coefficient for the square form of DIR\_OWNP is negative and as per the other two managerial is not statistically significant. The predicted signs are consistent with that found by Short and Keasey (1999), but Short and Keasey's study find the coefficients on the three ownership variables to be statistically significant. The OLS results for the three managerial ownership variables may not support hypothesis 4. The institutional shareholder ownership holdings shows a positive coefficient for all three-performance variables, but is statistically significant at the 5% level of confidence for TQ only, in Table 9.9 Panel A, but insignificant for ROA and MBV.

For ROA, the three ownership variables show the opposite signs to the expected one. The direction of the coefficient of DIR\_OWNP squared is positive, DIR\_OWNP cubed is negative, and both are statistically significant, whereas the DIR\_OWNP is negative and statistically insignificant. The signs are opposite to that for TQ. The coefficient for institutional shareholder is positive but not statistically significant. The following variables are statistically significant: LOG (TA), DUMMYCEO, INDEP and LOG (LISTAGE) at 5% significance. VOL and CASH/TA variables are significant at 10% level. Interestingly, debt is not significant for ROA. This contrasts the results obtained by (McConnell and Servaes 1990; Short and Keasey 1999).

Finally, for MBV the three ownership variables show the opposite signs to the expected one (similar to ROA). Both the DIR\_OWNP and DIR\_OWNP cubed are negative and statistically insignificant, whereas the DIR\_OWNP squared is positive and statistically insignificant. With MBV as the dependent variable, VOL and CASH/TA are statistically significant. However, with or without fixed-effects

the adjusted R squared is very low and negative. I believe that the measurement of MBV is suspect.

Using the company fixed-effects, Panel B, consistency of the signs between TQ and DIR\_OWNP, DIR\_OWNP squared and DIR\_OWNP cubed from the results without fixed-effects is not consistent. With TQ, the results do not show the predicted signs for the cubic relationship, that is, the results are negative – negative – positive.

With ROA, the direction of the coefficient is positive - positive - negative. DIR\_OWNP squared, and DIR\_OWNP cubes are statistically significant at 5% level. In the cross-sectional with company fixed-effects, the adjusted R- square increases to 75% and 87% for TQ and ROA, respectively. However, there was no significant change when using MBV as dependent variables. The results suggest that the independent variables as determinants of MBV cannot explain the variations. For MBV, the adjusted R-squared with or without the fixed-effect has very low explanatory power and hence is dropped from further analysis.

**Table 9.9: Performance and Director Ownership - Cubic Relationship**

$$PERFORMANCE = \alpha_0 + \beta_1 DIR\_OWNP + \beta_2 DIR\_OWNP^2 + \beta_3 DIR\_OWNP^3 + \beta_4 INST\_OWNP + \beta_5 LOG(TA) + \beta_6 PPE/TA + \beta_7 DEBT + \beta_8 VOL + \beta_9 CASH/TA + \beta_{10} DUMMYCEO + \beta_{11} INDEP + \beta_{12} LOG(LISTAGE) + \varepsilon$$

Equation 9.4

OLS regression with company performance as the dependent variable using panel data

White cross-section standard errors and covariance (d.f. corrected)

Dep. Var:	Panel A: no Fixed-Effects			Panel B: with Fixed-Effects		
	TQ	ROA	MBV	TQ	ROA	MBV
C	1.27 [2.33]*	-18.42 [-2.44]*	-0.70 [-0.22]	-0.50 [-0.66]	-34.33 [-2.38]*	-10.95 [-4.31]**
DIR_OWNP	0.02 [0.67]	-0.38 [-1.43]	-0.08 [-0.57]	-0.00 [-0.11]	0.01 [0.08]	-0.64 [-1.63]
(DIR_OWNP)^2	-0.00 [-1.31]	0.03 [3.26]**	0.00 [0.42]	-0.00 [-0.14]	0.03 [3.18]**	0.02 [1.65]
(DIR_OWNP)^3	0.00 [1.52]	-0.00 [-3.79]**	-0.00 [-0.27]	0.00 [0.18]	-0.00 [-3.11]**	-0.00 [-1.66]
INST_OWNP	0.01 [3.19]**	0.02 [0.60]	0.03 [1.82]	-0.00 [-0.92]	-0.04 [-0.35]	0.03 [6.33]**
LOG(TA)	-0.23 [-12.31]**	8.87 [4.22]**	-0.24 [-0.35]	0.13 [0.48]	22.61 [5.52]**	0.98 [1.42]
PPE/TA	0.30 [1.11]	-2.40 [-1.10]	-0.69 [-0.43]	-0.29 [-0.67]	-13.30 [-1.29]	1.40 [0.82]
DEBT	0.31 [4.82]**	-35.44 [-1.49]	1.71 [0.25]	1.22 [3.11]**	-91.14 [-8.61]**	-0.41 [-0.08]
VOL	0.89 [3.58]**	-19.38 [-2.33]*	1.40 [2.33]*	1.08 [6.49]**	1.39 [0.28]	2.83 [3.72]**
CASH/TA	2.95 [11.99]**	-30.47 [-2.08]*	2.45 [11.06]**	3.22 [12.08]**	18.46 [1.37]	7.37 [2.60]**
DUMMYCEO	-0.27 [-3.04]**	10.26 [4.33]**	0.29 [1.81]	-0.20 [-1.58]	-4.12 [-1.02]	0.33 [0.64]
INDEP	-0.00 [-3.19]**	-0.33 [-6.38]**	0.01 [0.68]	-0.02 [-3.21]**	-0.19 [-2.01]*	0.06 [1.39]
LOG(LISTAGE)	0.41 [2.57]*	4.66 [3.67]**	0.84 [0.68]	0.91 [27.52]**	-14.23 [-3.46]**	3.06 [0.93]
Observations:	372	372	370	372	372	370
R-squared:	0.33	0.27	0.01	0.75	0.87	0.11
F-statistic:	14.45	11.11	0.43	5.12	11.70	0.21

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

Equation 9.4 is repeated, but in a hierarchical form. Table 9.10, Panel A, Model 1 refers to when only director ownership variable is used as one of the predictors in Model 1. Model 2 refers to the inclusion of the square of the

DIROWNPNP is added to the first model. Model 3 refers to when DIROWNPNP cube form is added to Model 2. All three models include the same control variables. Model 1 accounts for 32% of the variation in the TQ, The results show that DIR\_OWNPNP is negative, not in line with the alignment hypothesis, it is found to be statistically significant. Addition of  $DIR\_OWNPNP^2$ , there is no change in the R-squared and found not to be statistically significant. Addition of  $DIR\_OWNPNP^3$  the R-squared increases to 33%, but shows no statistical significance. The addition of DIR\_OWNPNP square and cube form does not contribute to the hypothesis of non-linear association between corporate performance and the proportion of shares owned by board directors, ability to predict the performance of AIM companies.

**Table 9.10: Tobin's Q on stepwise inclusion of ownership variable**

Dep. Var. TQ	Panel A: Without Fixed-Effects			Panel B: With Fixed-Effects		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
C	1.45 [4.17]**	1.52 [3.81]**	1.27 [2.33]*	-0.50 [-0.57]	-0.50 [-0.63]	-0.50 [-0.66]
DIR_OWNP	-0.01 [-46.51]**	-0.02 [-2.89]**	0.02 [0.67]	-0.01 [-1.27]	-0.01 [-0.43]	-0.00 [-0.11]
(DIR_OWNP)^2		0.00 [1.26]	0.00 [-1.31]		0.00 [0.02]	0.00 [-0.14]
(DIR_OWNP)^3			0.00 [1.52]			0.00 [0.18]
INST_OWNP	0.01 [3.97]**	0.01 [3.70]**	0.01 [3.19]**	-0.00 [-0.72]	-0.00 [-0.80]	-0.00 [-0.92]
LOG(TA)	-0.23 [-18.16]**	-0.24 [-15.19]**	-0.23 [-12.31]**	0.13 [0.49]	0.13 [0.50]	0.13 [0.48]
PPE/TA	0.30 [1.08]	0.29 [1.07]	0.30 [1.11]	-0.29 [-0.64]	-0.29 [-0.67]	-0.29 [-0.67]
DEBT	0.29 [3.85]**	0.30 [3.93]**	0.31 [4.82]**	1.23 [3.21]**	1.23 [3.22]**	1.22 [3.11]**
VOL	0.89 [3.92]**	0.87 [3.66]**	0.89 [3.58]**	1.08 [6.75]**	1.08 [6.62]**	1.08 [6.49]**
CASH/TA	2.91 [11.58]**	2.93 [12.50]**	2.95 [11.99]**	3.23 [12.04]**	3.23 [11.60]**	3.22 [12.08]**
DUMMYCEO	-0.28 [-3.16]**	-0.27 [-2.91]**	-0.27 [-3.04]**	-0.20 [-1.50]	-0.20 [-1.59]	-0.20 [-1.58]
INDEP	-0.01 [-5.79]**	-0.01 [-4.33]**	-0.00 [-3.19]**	-0.02 [-3.21]**	-0.02 [-3.20]**	-0.02 [-3.21]**
LOG(LISTAGE)	0.38 [2.54]*	0.39 [2.70]**	0.41 [2.57]*	0.91 [57.69]**	0.91 [70.52]**	0.91 [27.52]**
Observations:	372	372	372	372	372	372
R-squared:	0.32	0.32	0.33	0.75	0.75	0.75
F-statistic:	16.73	15.25	14.45	5.23	5.17	5.12

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

Table 9.11 Panel A and Panel B, reports the results of Hypothesis 5 without fixed-effects and with fixed-effects, respectively. The analysis shows that the inclusion of the largest (LA) shareholder ownership and its square allows testing for the monitoring and expropriation effects. The quadratic relation proposed here presents only one turning point. A graph of performance as a function of largest shareholder's holding - performance will be rising to begin with as LA increases (the motivation effect), will reach a maximum (the turning point or breakpoint De Miguel

*et al.* (2004), and then decrease as LA increases further (the entrenchment effect – see Figure 9.1). The slope or gradient of the line is given by the first derivative (or first differential) of the performance function. Since, the performance function has variables other than LA and LA<sup>2</sup> in it, one need to calculate the partial derivative relative to LA to work out the slope relative to LA. In a partial differentiation, the performance depends on several variables, not just on LA. Using partially differentiate with respect to LA all the other variables are held constant, and the first derivative of a constant is zero, so all these other terms drop out and do not feature in the first partial derivative. The slope of ‘an increasing function’ is positive and of a falling function is negative, so at the turning point where the function switches from increasing to decreasing, the slope must be zero. If the performance function is, for example,  $TQ = \alpha + \beta_1 LA + \beta_2 LA^2 + [\text{other terms}]$ , then the first derivative relative to LA is  $\beta_1 + 2\beta_2 LA$ , and at the turning point this equals zero. Therefore, rearranging the terms gives  $-\beta_1 = 2\beta_2 LA$ , or  $LA = -\beta_1 / 2\beta_2$ . As expected one of these coefficients ( $\beta_2$ ) to be negative and the other ( $\beta_1$ ) to be positive, this suggests that the turning point will be a positive value of LA. Assuming partial derivative equals zero, this turning point for the largest shareholding =  $-\beta_1 LA / 2\beta_2 LA^2$ . Since the estimated values for  $\beta_1$  and  $\beta_2$  are respectively 0.0288, and -0.0004 gives 36%. This estimation does not hold without fixed-effects, as the signs for LA and LA<sup>2</sup> are negative and positive, but statistically significant.

The results of the regression using ROA as the dependent variable, in Table 9.11 the expected signs of the coefficients on the variables LA and LA<sup>2</sup> are as predicted in Hypothesis 5, that is,  $\beta_1$  and  $\beta_2$  is positive and negative, respectively. This positive-negative direction of the two coefficients confirms the quadratic relationship between ROA and the largest shareholder ownership holdings. These results suggest that the AIM companies’ performance rises with increase in the largest shareholder concentration. This is in line with the monitoring effect provided by the concentrated shareholding of the largest shareholder. However, beyond this turning point, the performance is negatively affected by the largest shareholder ownership concentration. This suggests that at very high levels of blockholder there is potential of expropriation of minority shareholders in the AIM companies.

The coefficient value using MBV, as the dependent performance the coefficients of LA and LA<sup>2</sup> are not statistically significant and do not show the monitoring and the expropriation effects. The reason for this may be the financial crisis for the years 2008 and 2009 resulting in showing that the relationship is not statistically significant.

**Table 9.11: Performance and non-linear relationship with largest shareholding**

$$PERFORMANCE = \alpha_0 + \beta_1 LA + \beta_2 LA^2 + \beta_3 LOG(TA) + \beta_4 PPE/TA + \beta_5 DEBT + \beta_6 VOL + \beta_7 CASH/TA + \beta_8 DUMMYCEO + \beta_9 INDEP + \beta_{10} LOG(LISTAGE) + \varepsilon$$

Equation 9.5

Ordinary least squares regression with company performance as the dependent variable using panel data White cross-section standard errors and covariance (d.f. corrected)

Dep. Var.	Panel A: without Fixed-Effects			Panel B: with Fixed-Effects		
	TQ	ROA	MBV	TQ	ROA	MBV
C	1.48 [3.78]**	-13.40 [-1.77]	-0.27 [-0.08]	-0.97 [-0.75]	-19.35 [-1.45]	-13.99 [-4.30]**
LARGEST(LA)	-0.05 [-10.55]**	0.34 [1.98]*	-0.13 [-1.12]	0.029 [2.93]**	0.86 [3.16]**	-0.03 [-0.12]
(LARGEST)^2	0.00 [6.99]**	-0.00 [-0.95]	0.00 [1.38]	-0.00 [-2.24]*	-0.00 [-0.94]	-0.00 [-0.01]
INST_OWNP	0.01 [8.44]**	-0.11 [-4.05]**	0.04 [1.54]	-0.00 [-1.68]	-0.35 [-2.13]*	0.03 [1.33]
LOG(TA)	-0.24 [-39.90]**	8.88 [4.26]**	-0.22 [-0.33]	0.18 [0.58]	21.85 [6.11]**	0.90 [1.07]
PPE/TA	0.29 [1.09]	-0.86 [-0.38]	-0.53 [-0.37]	-0.25 [-0.62]	-2.52 [-0.27]	1.17 [0.50]
DEBT	0.28 [3.53]**	-35.17 [-1.48]	1.65 [0.24]	1.26 [2.96]**	-92.75 [-8.07]**	-0.81 [-0.16]
VOL	0.89 [4.47]**	-20.95 [-2.28]*	1.37 [2.20]*	1.10 [7.60]**	0.98 [0.19]	2.98 [3.30]**
CASH/TA	2.96 [11.09]**	-27.41 [-1.90]	2.71 [27.67]**	3.23 [11.21]**	19.11 [1.30]	7.22 [2.47]*
DUMMYCEO	-0.25 [-3.32]**	10.02 [4.65]**	0.14 [0.49]	-0.30 [-4.29]**	-6.43 [-1.63]	0.19 [0.19]
INDEP	-0.00 [-3.01]**	-0.39 [-6.68]**	0.01 [0.62]	-0.02 [-3.40]**	-0.29 [-2.79]**	0.07 [1.40]
LOG(LISTAGE)	0.45 [2.53]*	4.37 [3.95]**	0.93 [0.80]	0.89 [34.18]**	-12.83 [-3.09]**	3.41 [1.08]
Observations:	378	378	376	378	378	376
R-squared:	0.34	0.26	0.02	0.75	0.87	0.10
F-statistic:	16.84	11.51	0.55	5.23	11.23	0.20

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

## 9.9: Robustness Tests

The relationship between ownership and company performance may be spurious because the ownership, as well as the performance variables, may be industry specific, as the empirical analysis did not use a control variable as a proxy for the industry type. As this study relies on a panel data set, a fixed-effects model is used that regards the differences between companies as parametric shifts of the regression function and controls for possible differences across companies. The robustness of the determinants of ownership is examined using different ownership measures and different measures of performance.

A panel data set is used to allow for endogeneity issues. This sample does not show endogeneity issues when using the two stage least squares (2SLS) and three stage least squares (3SLS) regressions as the coefficients using the 2SLS and 3SLS were exactly the same as that of using ordinary least squares regression. Therefore, this study uses only the ordinary least squares regressions to test the Hypotheses 1 to 5.

Equation 9.5 is re-run, but the ownership variable is a measure of the fraction of shares owned by the institutional shareholders and its square form. Table 9.12, shows the results of the hypothesis that the relationship between the company performance and institutional ownership is non-linear. With TQ as the dependent variable and the fixed-effects model, the direction of the estimated coefficients  $\beta_1$  and  $\beta_2$  are in opposite directions, negative - positive, and statistically insignificant. When TQ is used as the dependent variable, the coefficients for institutional ownership and its square form are very close to zero. The control variables that show statistical significance at 5% level are LOG (TA), VOL and CASH/TA. With the inclusion of fixed-effects the coefficients sign change from negative to positive, but again statistically insignificant. The control variables that show statistical significance are DEBT, VOL, CASH/TA, INDEP and LOG(LISTAGE). The results imply that there is no association between TQ, as a performance measure and institutional ownership concentration. When fixed-effects are not included in the

regression, the LOG(TA), VOL, CASH/TA and LISTAGE control variables are statistically significant. When fixed-effects are included in the regression, the DEBT, VOL, CASH/TA, INDEP and LISTAGE control variables are statistically significant.

For both the ROA without and with fixed-effects, the coefficients on the variables INST\_OWNP and INST\_OWNP<sup>2</sup> have a positive and negative signs, respectively and both are statistically significant. Given the estimated values for the INST\_OWNP and INST\_OWNP<sup>2</sup>, the turning point of the relation between institutional ownership and TQ is

$$\mathbf{TQ: \text{ Minimisation point} = } -\beta_1/2\beta_2 = \mathbf{0.0134/(2*0.00014) = 48\%}$$

The results suggest that as institutional ownership increases initially, the sample companies have a lower performance. When institutional ownership reaches around 48%, a positive association between institutional ownership and TQ emerges. This suggests that at higher levels of institutional ownership in the AIM companies supports the monitoring effects.

The results, Table 9.12 (Panel B), when using ROA as the dependent variable, show that the direction of the coefficients for INST\_OWNP ( $\beta_1$ ) and INST\_OWNP<sup>2</sup> ( $\beta_2$ ) change from negative to positive, respectively and statistically significant at 5% (see Table 9.12). The results are robust with the inclusion of fixed-effects in the equation. The minimisation point is much higher for ROA than for TQ.

$$\mathbf{ROA: \text{ Minimisation point} = } -\beta_1/2\beta_2 = \mathbf{0.731394/ (2*0.007122) = 51\%}$$

The results on the initial negative association between institutional ownership and company performance may explain that institutional shareholders do not contribute to the monitoring role, however as performance improves so does the institutional share ownership. The positive coefficient at higher levels suggests that institutional shareholders have a monitoring role at much higher levels. There is no theoretical basis to suggest at what particular ownership level this turning point

occurs. However, by assuming the complementary relationship between the director ownership and the institutional ownership, the results suggest a non-linear association between the institutional ownership and company performance. The turning point is between 48% and 52%, a turning point above the sample mean of 43% for institutional shareholders suggests that the institutional shareholders in the AIM companies initially have a weak incentive to be active monitors of the companies they invest in. This is overcome when the institutional investors have sufficiently larger equity shareholdings. Without the fixed effect ROA regression, there is positive and statistically significant association with company size, DUMMY CEO and LOG (LISTAGE) control variables. In addition, the regression shows there is negative and statistically significant association with VOL and INDEP control variables. With the fixed-effects model, the regressions show that both DEBT and LOG (LISTAGE) have a negative coefficient and statistically significant, whereas DUMMYCEO has a negative coefficient, but shows no statistical significance.

The results in Table 9.12 contrast McConnell and Servaes (1990), who find a significant and positive relationship with TQ, but is consistent with Cornett *et al.* (2007) who find a positive and significant relationship between performance measure, operating cash flow return, and institutional shareholdings. We can interpret this that at lower levels of institutional shareholdings the monitoring effect is not so strong and institutional shareholders can sell their shares, but at higher levels the institutional shareholders are more committed and associated with higher performance using the accounting measure of performance and consistent with the notion that institutional ownership enhance monitoring.

**Table 9.12: Performance non-linear relationship with institutional shareholding**

$$\begin{aligned}
 PERFORMANCE = & \alpha_0 + \beta_1 INST\_OWNP + \beta_2 iINST\_OWNP^2 + \beta_3 LOG(TA) + \beta_4 PPE/TA + \\
 & + \beta_5 DEBT + \beta_6 VOL + \beta_7 CASH/TA + \beta_8 DUMMYCEO + \beta_9 INDEP \\
 & + \beta_{10} LOG(LISTAGE) + \varepsilon
 \end{aligned}$$

Ordinary least squares regression with company performance as the dependent variable using panel data. White cross-section standard errors and covariance (d.f. corrected).

Dep. Var.	PANEL A		PANEL B	
	TQ	TQ	ROA	ROA
C	1.02 [2.05]*	-0.58 [-0.60]	-0.83 [-0.11]	5.55 [0.26]
INST_OWNP	0.01 [0.46]	-0.01 [-1.29]	-0.54 [-4.46]**	-0.73 [-3.75]**
INST_OWNP <sup>2</sup>	0.00 [0.39]	0.00 [1.29]	0.01 [3.62]**	0.01 [8.41]**
LOG(TA)	-0.24 [-3.01]**	0.16 [0.56]	9.07 [4.37]**	20.15 [4.75]**
PPE/TA	0.22 [0.65]	-0.37 [-0.97]	0.68 [0.31]	-6.67 [-0.69]
DEBT	0.24 [0.69]	1.19 [3.27]**	-35.14 [-1.52]	-95.35 [-8.53]**
VOL	0.99 [3.12]**	1.08 [7.03]**	-21.49 [-2.38]*	0.82 [0.16]
CASH/TA	2.77 [5.78]**	3.11 [11.16]**	-26.57 [-1.87]	14.28 [1.12]
DUMMYCEO	-0.20 [-0.77]	-0.12 [-1.85]	8.03 [3.58]**	-4.78 [-1.83]
INDEP	-0.00 [-0.52]	-0.01 [-3.00]**	-0.42 [-5.80]**	-0.28 [-2.01]*
LOG(LISTAGE)	0.41 [2.13]*	0.89 [61.57]**	5.08 [4.57]**	-13.60 [-3.14]**
Fixed -Effects	No	Yes	No	Yes
Observations:	378	378	378	378
R-squared:	0.31	0.75	0.26	0.86
F-statistic:	16.39	5.28	12.62	11.23

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

## 9.10: Conclusion

This chapter uses a sample of 131 companies listed on the AIM between 2008 and 2010 and extends the UK based literature on the relationship between ownership holdings and company performance in several ways. The analysis begins by investigating the determinants of ownership. Hypothesis 1 states that the ownership shareholdings have a linear relationship to company performance. To summarise, Hypothesis 1 shows a negative relationship with CEO\_OWNP and DIROWNP. As explained earlier, due to the complementary effects between director and institutional share ownership, the results show a positive association with institutional ownership and this is statistically significant. With LA and LA5, the direction of the coefficient is negative, but do not show any statistical significant relationship with TQ. With the inclusion of fixed-effects, the CEO\_OWNP has a negative coefficient and is moderately significant. The LA5 shareholdings give a negative coefficient, but gives a weak statistically significance.

Hypothesis 2, examines the relationship between company ownership and volatility. The results in Table 9.8 (Panel A) without firm fixed-effects show that coefficients of the variables volatility, and its square form, have a negative and positive sign, respectively. Both volatility and the square form are statistically significant with the CEO, director and institutional ownership shareholdings. Therefore, higher percentage of the ownership variable is associated with given increase in volatility. The results contrast the results of Demsetz and Lehn (1985, 1165) who find a positive –negative suggesting *'the increase in concentration of ownership associated with given increases in instability diminishes.'* With the inclusion of fixed-effects in the regression model, the statistical significance disappears.

For Hypothesis 3, the results are mixed. For example, the results without fixed-effects show that the regression of TQ on ownership variable gives a negative coefficient with DIR\_OWNP and positive with ROA, both are statically significant in both cases. Regression of TQ on INST\_OWNP is positive and statistically significant. With fixed-effects, regression of ROA on director ownership shows a

positive coefficient and is statistically significant. Hypothesis 3 is not rejected, but the direction of the coefficient depends on the performance variable and the inclusion of fixed-effects.

For Hypothesis 4, the variable  $DIR\_OWNP$ ,  $DIR\_OWNP^2$  and  $DIR\_OWNP^3$  have the expected signs, positive-negative-positive but are not statistically significant when TQ is the dependent variable. One interpretation for the increase in TQ with increase in director ownership suggests the convergence of interest, while the decline relates to the convergence of entrenchment (see Morck *et al.* 1988, 312). Morck *et al.* show a positive association between TQ and high managerial ownership but has a weak statistical significance. With ROA as the dependent variable, the signs are opposite to that with TQ, negative-positive-negative, but the results are statistically significant with  $DIR\_OWNP^2$  and  $DIR\_OWNP^3$ . This result contrasts the findings of Morck *et al.* (1988) Short and Keasey (1999), who show a positive-negative-positive for the coefficients on their measures of  $DIR\_OWNP$ ,  $DIR\_OWNP^2$ , and  $DIR\_OWNP^3$  and all are statistically significant. Therefore, the results of Hypothesis 4, cannot say that the cubic relationship between the performance of AIM companies and ownership is cubic, that is, increase in director ownership shifts from alignment, to entrenchment and to alignment. Hence, the present results on AIM companies cannot confirm that the convergence of interest effect dominates the entrenchment effect at high levels of ownership.

For Hypothesis 5, when company performance is regressed on LA and  $LA^2$ . With TQ, the results show that inclusion of fixed-effects, the coefficients for LA and  $LA^2$  have the expected signs, positive-negative sign, and the results are statistically significant, which confirms the quadratic relationship between company performance and the largest shareholder. The results suggest that the value of AIM companies rises as the largest ownership concentration increases. This clearly agrees with the theoretical reason that monitoring by the largest shareholder is provided and that beyond the turning point is negatively affected by the largest shareholder. Here, the concentration of the ownership structure allows the expropriation of minority shareholders. For ROA, the results show a positive coefficient for the largest

ownership and statistically significant for both inclusion and exclusion of fixed-effects. However, at higher levels of concentration there is no association.

Most researchers study on ownership performance relationship assumes that each form of ownership affects the company performance separately. However, the size of shareholdings by directors bears a complementary relationship to the size of shareholdings of the institutional shareholders. This prompts the question as to whether insider ownership, that is, directors affect the influence of institutional investors.

This chapter provides evidence on the determinants of ownership structure for the AIM companies. In addition, it shows how different ownership shareholdings affect the performance of the AIM companies. The empirical evidence supports the monitoring and expropriation effects but is dependent on the performance measure and the type of ownership concentration. The results suggest that the convergence of interest and entrenchment effects on the company performance and director ownership is not evident in the AIM companies. Hence, to conclude that differences in corporate governance system for the AIM companies may be able to explain some of the differences.

An assumption of the current analysis for the AIM companies is that causality runs from director ownership to company performance. However, it is difficult to ignore that 'reverse causality' may be influencing the results. For example, the positive alignment between ROA and director ownership may suggest that the more successful companies provide their directors with more equity shares, or the directors are unwilling to sell their equity shares. In this case, the causality runs from performance to director ownership.

## CHAPTER 10 EXECUTIVE REMUNERATION AND PERFORMANCE

### 10.1: Introduction

The aim of this chapter is to investigate the determinants of CEO pay for the companies quoted on the London Stock Exchange (LSE) Alternative Investment Market (AIM) for the period 2008 to 2010. In chapter 8, a composite corporate governance score showed no association with company performance. In Chapter 9, the results give a negative association between chief executive officer's (CEO) ownership holdings and Tobin's Q.

Executive remuneration, including CEO pay, is well researched for the United States listed companies, and interest is now growing by researchers from other countries. For example, Australia (Schultz *et al.* 2013), Canada (Graham *et al.* 2012), China (Conyon and He 2011), Greece (Drakos and Bekiris 2010), Italy (Barontini and Bozzi 2011), Japan (Nakazato *et al.* 2011), Korea (Kato *et al.* 2007), and Netherlands (Van Der Laan *et al.* 2010). The dominance of research into US companies reflects the difficulties in getting consistent data for other countries, mainly because of the variation in the manner of presentation of director remuneration data by individual companies. Earlier researchers have used remuneration measure such as cash salary plus bonus while the most recent research has been focusing on options granted or performance related pay (Main *et al.* 1996; Ozkan 2011).

The seminal work of Berle and Means (1932) on the separation of control and ownership suggests that agents (management) may not necessarily act to enhance shareholders' wealth, but may primarily act in a manner that serves their own self-interest. However, as directors own shares in their companies, the directors' interests should align with those of the shareholders. There is empirical evidence consistent with the Berle and Means position. For example, Baumol observes that executive salaries appear to be, '*far more closely correlated with the scale of the operations of the company than with its profitability*' (Baumol 1967, 46; cited in Lewellen and Huntsman 1970, 710). However, the data on which Baumol's

statement depends on are nearly 50 years old, and the issue of how executive remuneration, particularly the CEO pay, is determined is by no means settled. This justifies further research, particularly relating to a hitherto underexplored set of companies.

The research approach employed in this chapter uses an econometric method to investigate the relationship between the CEO pay and company performance. The research objective is to identify whether there is evidence to support a causal relationship between company performance and chief executive pay. This reflects the basic assumption that higher company performance will lead to higher CEO pay. However, it is likely that the extent of CEO ownership and director ownership of the company's shares will have a moderating effect on the relationship between corporate performance and CEO pay. One expects that CEOs with greater equity stake in the company are likely to be motivated by remuneration differently, from those with lower equity stake.

For this chapter, the final sample consists of 197 non-financial AIM companies and 591 company years over the period 2008 to 2010. This chapter considers the third and final research question, to identify the determinants of executive pay (including CEO remuneration). The analysis consists of ordinary least squares regression using panel data set. The variables for remuneration include chief executive remuneration (CEOPAY), highest paid director (HPD), aggregated total directors pay (PAYT) and the ratio of CEO PAY over total remuneration of all directors (CEOTR). The variables for company performance are Tobin's Q (TQ), and return on assets (ROA). The other governance variables include ownership shareholdings of CEO (CEO\_OWNP), board of directors, (DIR\_OWNP) and institutional investors (INST\_OWNP). In addition, governance variables include dummy variables for FOUNDER and the presence of the duality role of the CEO/as the chairman roles (DUMMYCEO), and finally the board size (BSIZE). The control variables include logarithm of total assets (LOG (TA)), market capitalisation (MKVAL), cash and cash equivalent (CASH/TA), property plant and equipment (PPE/TA) and leverage (DEBT).

The results show that there is a positive and statistically significant relationship between the CEOPAY, HPD and PAYT regressions on TQ as a measure of performance. However, using ROA, as the performance measure, the coefficients are negative and statistically insignificant for all the variables except with HPD, but the coefficient value is negative and very low. However, inclusion of fixed-effects suggests that there be no association between executive pay and ROA. Consistently, the regressions show that larger companies pay higher remuneration to their CEOs, have the higher HPD and higher PAYT, which is consistent with previous research on executive remuneration and performance (Conyon and Murphy 2000; Ozkan 2007).

The ratio of CEO pay to total remuneration, CEOTR, regression on TQ has a negative and statistically significant coefficient with the inclusion of fixed-effects and the association disappears with non-fixed-effects. The regression of CEOTR on ROA gives a negative association and statistically significant without fixed-effects. However, inclusion of fixed-effects shows no association.

The results of ownership as a governance variable on the right-hand side of the regression model are dependent on the ownership type. For example, the regression, without fixed-effects, between CEOPAY and CEO\_OWNP has a negative coefficient and statistically significant. DIR\_OWNP gives similar results. However, with the fixed-effects, for both CEO\_OWNP and DIR\_OWNP the direction reverses. With INST\_OWNP, there is no association with CEOPAY. Using ROA as the performance variable the results are similar as above, except that the institutional shareholdings are now negative and statistically significant.

The results also include some robustness tests. First, the market capitalisation as a proxy for company size gives a positive and statistically significant association with pay as the dependent variable. Second, using the logarithm of pay and logarithm of TQ, the results are positive and statistically significant.

The organisation of the rest of the chapter is as follows: section 10.2 outlines the institutional framework in the United Kingdom. Section 10.3 provides an overview of the literature on executive remuneration and Section 4 concentrates on the UK. Section 10.5 describes the hypothesis and section 10.6 describes the remuneration, performance and other explanatory variables. Section 10.7 provides information on data sources and description of data. Section 10.8 explains the empirical results. Section 10.9 considers the robustness and finally a conclusion in Section 10.10.

## **10.2: Institutional Framework**

The corporate governance disclosure requirements in the UK for directors' remuneration have significantly improved since the publication of the Cadbury Report (1992), Greenbury Report (1995), and the Combined Codes (1998, 2003, 2006, and 2008). The Cadbury Report (1992) recommended that companies should establish remuneration committees, and since then the majority of the companies listed on LSE and AIM have established remuneration committees. The Greenbury Report (1995), advanced the Cadbury approach by extending the role and independence of the remuneration committee, thereby, preventing the executives to decide their pay packages themselves. The Hampel Report (1998) requires the UK companies to provide details on directors' remuneration similar to that in the US. Hampel (1998) stresses the need to pay non-executives fixed fees and recommends the barring of giving them incentive remuneration such as long-term incentive plans (LTIPs). The Department of Trade and Industry (2002) now requires the disclosure in full details of the company's remuneration policy and for each director their remuneration package, together with explanations. The remuneration committee should be composed of independent non-executive directors, as recommended by the Higg's report 2003 (s13.8, p.61). The presence of independent non-executive directors increases the monitoring function of the committee in view of the potential conflict of interest. The remuneration committee's accountability is to the shareholders and the companies must put the remuneration report to shareholders for a vote at the annual general meeting.

In May 2003, the European Union Commission recommended that all listed companies in the European Union (EU) should report on individual director remuneration arrangements. By 2006, the following EU members had mandatory disclosure: Belgium, France, Germany, Ireland, Italy, Netherlands, Sweden and United Kingdom. In addition, Norway introduced similar disclosure requirements, while Switzerland required disclosure for the highest paid executive only. There are differences in disclosure requirements between the UK and other countries: for example, the disclosure of the remuneration of the five most highly paid executives has been mandatory in Canada since 1993 (Sapp 2008, 714). Since 2006, the higher disclosure rules on remuneration arrangements for individual members of the board have aided the investigation of remuneration packages for the chief executive officer and other board directors in AIM companies.

Given the dominance of research of US companies, interesting comparisons are likely to arise by examining UK companies. Both the UK and the US have similar regulatory systems due to the ‘Common Law’ as compared to the ‘Civil Law’ system in Europe; however, the UK market is distinct in that it has principle-based regulation rather than rule-based regulation as in the US.

### **10.3: Literature Review**

Empirical researchers on CEO pay predominantly explain the theoretical context based on optimal contracting and the managerial power paradigms. Optimal contracting or arm’s length contracting approach (Bebchuk and Fried 2004, 5) follows the traditional agency theory framework, which seeks to align the interests of the managers and the shareholders with the view to maximising shareholder value , (for example, Grossman and Hart 1983; Abowd and Kaplan 1999; Murphy 1999; Core *et al.* 2003).

An alternative view concerning executive compensation is the managerial power approach, which assumes that the executives have significant power over the board of directors to influence their own pay and will use that power to extract rents from the company (Bebchuk and Fried 2004, 6). They favour the managerial power

hypothesis to explain that the CEOs have excess remuneration. The implications are that CEO is the influencing factor in the pay setting process as the CEO has substantial control over the composition of the board of directors and the remuneration committee thus determining the CEO pay (Armstrong *et al.* 2012). Support for this hypothesis is found in that the CEO pay is disproportionate for companies with comparatively weak corporate governance characteristics such as weak boards, no dominant outside shareholder, and a manager who has a relatively large share ownership (Bebchuk *et al.* 2002; Bebchuk and Fried 2004). Studies have used a number of corporate governance factors that relate to CEO power: these factors include CEO tenure, CEO ownership, board size, CEO and Chairman duality, and board ownership (Veliyath *et al.* 1994).

Researchers on CEO pay use the agency theory as the foundation of their theoretical framework, and there is general support that there is a positive relationship between executive remuneration and company performance (Lazarides *et al.* 2008). Earlier empirical works on the determinants of executive remuneration use only two predictors, company size and profitability. There is pervasive evidence to suggest that company size be a major determinant of CEO pay (Ciscel and Carroll 1980; Murphy 1999). Gabaix and Landier (2008, 49) use a simple equilibrium model find that company size, alone can almost fully explain the level of CEO pay. Several academic researchers find strong evidence for a positive association between an increase in the CEO pay and the company size, (for example, Roberts 1956; Cosh 1975; Jensen and Murphy 1990b; Hubbard and Palia 1995; Bliss and Rosen 2001; Gabaix and Landier 2008). Researchers observe the magnitude and the significance of the coefficients for company performance, as a higher coefficient for company performance suggests that executives will be motivated to work towards the improvement of the performance measures and align their interests with those of the shareholders. Roberts (1956) use data from large listed US companies and finds a stronger relationship between remuneration and sales compared to remuneration and profits. Similarly, McGuire *et al.* (1962) find that that executive remuneration has a higher correlation with measures of company size than with profits. McGuire *et al.* (1962) show that even after controlling for sales revenue, company profits show little or no correlation with executive remuneration. The above findings support Baumol

(1967) argument that executives' pay support is increasing the size of the company. However, Lewellen and Huntsman (1970, 719) find sales to be irrelevant and infer '*there is greater incentive for management to shape its decision rules in a manner consistent with the shareholders' interest than to seek the alternative goal of revenue maximisation*'. Smyth *et al.* (1975); Ciscel and Carroll (1980, 509) contrast, Lewellen and Huntsman, that executive pay depends on both company size and profits whereas Meeks and Whittington (1975) finds that size is the main predictor of executive pay.

In previous research, the pay variable has been the non-equity forms of pay such as salary and bonus, this is termed the cash remuneration. According to Bebchuk and Fried (2004, 8) much of the evidence suggests a weak association between the cash compensation and companies' industry-adjusted performance.

There is empirical evidence to show a correlation between the level of directors' pay and other corporate governance variables, such as executive ownership (Cheng and Firth 2005) and institutional owners (Hartzell and Starks 2003).

Overall, the conclusions in the prior studies regarding the association of CEO pay and performance show that the sample selection, the country in question and the specific period influence the analysis.

#### **10.4: Evidence from the UK**

Studies of large UK companies show a positive relationship between directors' remuneration and the company's performance, for example, Gregg *et al.* (1993); Conyon (1997, 504). McKnight (1996, 563) finds performance and size are important determinants of executive remuneration and that the size variable explains 48% of the variance in salary. Other research in the UK, such as Eichholtz *et al.* (2008), have found a weak association between executive cash remuneration and the pay-for-performance. However, Girma *et al.* (2007) conclude that the executive remuneration appears to be insensitive to performance and, in fact, Gregg *et al.* (2005) find little relationship between pay and performance. It was noted that Ozkan

(2007, 2011); and Stathopoulos *et al.* (2005) both find an association between higher performing companies and executive remuneration, and both posit that the link between poorer performing companies and executive remuneration is weak. The primary analysis within these studies is whether company performance or size has been a determinant of pay. These studies have found a positive link between company size and remuneration; however, the relationship between performance and remuneration is mixed.

The most common measure of pay in UK studies has been the cash remuneration (Gregg *et al.* 2005; Girma *et al.* 2007; Farmer *et al.* 2013) measured as the sum of base pay and annual bonus, the latter based on performance. CEOs also receive share options, which are rights to purchase shares at a pre-specified exercise price for a specific period, and long-term incentive plans (LTIPs). Another common measure is the total remuneration, which consists of the sum of the salary, annual bonus, share options granted and the LTIPs.

Lewellen and Huntsman (1970) suggest that cash remuneration is a reliable proxy for total remuneration, but this research took place over 40 years ago, so the finding might not be valid today. In prior research, one of the reasons for excluding the long-term incentives was due to the difficulties in collecting consistent data and their value. However, since 2002 the UK listed companies have been required to disclose remuneration details in their annual reports. The remuneration disclosure has allowed researchers to improve their investigations and use different measures of pay. For example, McKnight and Tomkins (2004) uses salary, bonus and share options and argue that CEO or an executive through long tenure are likely to influence the pay setting process and design the remuneration scheme to meet their preferences. Ozkan (2007, 354) uses the following measures of pay: cash remuneration, total remuneration, LTIP awards and stock options.

A variety of explanations for the differences in remuneration studies has been associated with researchers' use of different sets of data (both hand-collected and purchased), regulatory settings, econometric techniques, measurements and proxies

for the variables. The evidence from the empirical research shows strong support for sales and profit as the important determinants of CEO pay. Where researchers have found any evidence, they have shown statistically weak association between CEO pay and company performance (Gregg *et al.* 1993; Conyon *et al.* 1995). However, the variations in sensitivities found have been wide, suggesting that there are other influencing factors that the models are not capturing. McGuire *et al.* (1962); Cosh (1975); Meeks and Whittington (1975) find no evidence, or only a very weak relationship between executive remuneration and performance of the company.

Several studies on executive remuneration in the UK, for example, Cosh (1975); Meeks and Whittington (1975); Gregg *et al.* (2005); Ozkan (2007) have shown that company size are a significant determinants of executive pay than measures of shareholder performance such as earnings per share and the accounting rate of return. The shareholder performance measures are less statistically significant in both cross-section and time series analysis than are company size measures. In instances, when the shareholder performance measures are significant they have a much smaller correlation coefficient. Cosh (1975, 89) compares both quoted and unquoted UK companies for the period 1968 to 1971 and shows that company size as determinant of CEO remuneration alone explains 49% of the variance of the natural logarithm of CEO remuneration. Inclusion of profitability as an additional explanatory variable increases the variance slightly to 54%. He further shows that the results of the smaller companies were different from that of, the larger companies where size alone explains 19% of the variance and the inclusion of profitability increases the variance to 34%.

Main *et al.* (1996) use both cash and equity-based remuneration for a small sample (60 UK companies) for the period 1983 to 1989. Although the sample size is relatively small, they show that the sensitivity of total remuneration including share options of the highest paid director (HPD) to company performance is low. Gregg *et al.* (2005) also find weak relationship between executive cash remuneration and company performance over the period 1994-2002.

Ozkan (2007) considers corporate governance mechanisms effects and level of CEO remuneration for 414 UK companies for the fiscal year 2003-2004. The Ozkan study shows that company performance does not have an influence on CEO remuneration. However, board structure and ownership shareholdings both explain significant amount of cross-sectional variation in total CEO remuneration. One major limitation of this analysis is the use of a single year data, fiscal year 2003-2004. Although Cosh and Hughes (1997) show that financial institutional ownership shareholdings has no effect on the level of pay or the sensitivity of pay to performance, however the Ozkan study shows that institutional ownership has negative, but significant, impact on CEO remuneration.

Doucouliagos *et al.* (2012) use an interesting method, meta-regression analysis, where they combine the results of 44 empirical studies of pay and performance relationships among UK companies. The Doucouliagos *et al.*, study finds little association between CEO pay and corporate performance. Their measure of performance is ROA and shareholder return.

Farmer *et al.* (2013) using data from 204 largest industrial UK companies, provide robust evidence consistent with the principal-agent theory that basic pay and annual bonus are determined relatively to the annual FTSE 350 performance.

Table 10.1 summarises some of the UK research on remuneration and performance and shows there is some consensus within the empirical literature as to the association between executive remuneration, company size and company performance. There is some variation in the results due to the use of different samples. However, they are not very different in their sample selection as they use large UK companies. There are limitations to some of the prior work in UK such as using only the information of the HPD due to the disclosure regime, which allowed only the identification of the HPD and further some of these studies did not address endogeneity.

The evidence shows systematic association between executive pay and specific governance characteristics; however, the research on CEO pay has concentrated on large listed UK companies and, therefore, this identifies a gap to research CEO and executive pay on the smaller AIM companies. The following extract suggests that the level of executive remuneration is highly influenced by the CEOs in the AIM companies indicating that they are powerful in their decision-making, an example of the managerial elites setting described as class hegemony in Chapter 3. *'The chief executive of Gulf Keystone Petroleum defended his \$22m (£14m) pay package on Monday, insisting it was justified by the company's soaring share price'* (Gosden 2012).

**Table 10.1: Summary of Remuneration Studies in the UK**

<i>Author</i>	<i>Sample</i>	<i>Data Source</i>	<i>Remuneration</i>	<i>Performance</i>	<i>Governance</i>	<i>Others</i>	<i>Method</i>	<i>Conclusion</i>
Cosh (1975)	1600 large Manufacturing, distribution, construction, transport, and miscellaneous services sector; 1969-1971	Department of Trade and Industry	HPD, logarithm of ay average pay over 1969-1971	Rate of return on net assets		Natural logarithm of net assets	OLS	Size is a major determinant of CEO compensation and the inclusion of profitability also affects compensation but not to the same extent. The results are not the same for smaller companies where both size and profitability is a strong determinant of compensation.
Meeks and Whittington (1975)	Manufacturing and Distribution sector; 1969-1971	Published accounts	HPD - salaries, fees and bonuses; average salary of directors	Rate of return		Total assets; Sales	OLS	Relationship between pay and size is positive and significant; but between pay and profitability not significant.
Mcknight (1996)	90 large companies for the periods of 1992, 1993 and 1994	Published accounts	Percentage change in the sum of salary and percentage chagne in the sum of salary and annual bonus	Percentage chagne in EPS, operating profits and sales turnover		Natural log of sales turnover and total assets in the year t-1	OLS	Changes in operating profits are weakly but significantly related to chagnes in annual bonuses. Changes in shareholder returns showed no relationship to changes in annual bonuses. Changes in executive salary, sales turnover and shareholder returns were not significantly associated with changes in EPS

<i>Author</i>	<i>Sample</i>	<i>Data Source</i>	<i>Remuneration</i>	<i>Performance</i>	<i>Governance</i>	<i>Others</i>	<i>Method</i>	<i>Conclusion</i>
Conyon (1997)	213 large UK companies between 1988 and 1993	Survey data for governance indicators and DataStream	Salary plus bonus for HPD	Shareholder return	CEO and Chairman duality; remuneration committee	Logarithm (sales); growth: change in logarithm (sales)	OLS	Association between pay and performance is positive and significant at time,t and negative and insignificant when using t-1
Cosh and Hughes (1997)	64 UK Electrical Engineering sector;1989-1994	Annual reports and financial press	CEO (£)	ROCE, Total shareholder return		TALCL, Sales, dummy variables, proportion of non-executive directors	OLS	Pay levels aligned with company size and growth
Conyon and Peck (1998)	Financial Times top UK 100 companies by market value	Hemmington Scott Publishing Limited; DataStream International; annual reports	HPD - salary and bonus	Total shareholder return	NEDs; nominating committees; CEO duality; largest shareholder ownership		Panel data with fixed-effects	
Conyon and Murphy (2000)	510 UK and 1,666 USA companies by market capitalisation	UK - Annual reports and DataStream in; US -S&P's Compustat's ExecuComp	Logarithm (salary and bonus); logarithm (total compensation); other cash pay, share options and LTIPs.	Logarithm (shareholder value)	Share ownership	Logarithm of sales	OLS	Expected pay levels after controlling for company size and industry CEO pay levels are higher in the US than in the UK

<i>Author</i>	<i>Sample</i>	<i>Data Source</i>	<i>Remuneration</i>	<i>Performance</i>	<i>Governance</i>	<i>Others</i>	<i>Method</i>	<i>Conclusion</i>
Buck <i>et al.</i> (2003),	287 UK nonfinancial companies in FTSE 350	Annual reports; shareholder circulars; telephone enquiries	Logarithm of (salary + annual bonus + benefits + pensions + change in options value + change in options value + change in equity value + dividend income + change in value of LTIPs).	Total shareholder return	Dummy for director who is CEO; dummy for Chairman and a dummy for dual role Chairman/CEO	Sales, Industry dummies, R&D over total assets	Cross-section OLS	LTIP is associated with higher absolute executive pay levels, but the performance-pay sensitivity is much lower
Ozkan (2007)	414 large UK companies for the fiscal period 2003/2004	Annual reports; Hemscott and Data stream	Cash compensation; Equity compensation and Total compensation	Shareholder return; change in shareholder wealth; TQ	Board size; NED, ownership: institutional, 4 largest institutional, blockholder, CEO and directors	Sales	OLS - cross sectional regression	Higher level of CEO compensation with larger boards and higher proportion of non-executive directors; institutional and blockholder ownership is significant
Dong and Ozkan (2008),	Institutional investors and director pay: an empirical study of UK companies	Hemscott and Data stream	CEO cash pay; average pay of all executive directors, logarithm of CEO pay and logarithm of average cash pay of all directors	TQ	Ownership: institutional, CEO and director	Logarithm of total assets, leverage, cash flow and dividend	OLS - cross sectional regression	Size and cash positively and significantly influence pay; CEO ownership, dividend and leverage has no significant impact on the level of CEO pay.
Guest (2010),	1,880 UK companies for the period 1983-2002		Logarithm of the cash compensation	Return measured as logarithm of buy and hold shares	Logarithm of board size; proportion of NEDs	Logarithm of sales		

<i>Author</i>	<i>Sample</i>	<i>Data Source</i>	<i>Remuneration</i>	<i>Performance</i>	<i>Governance</i>	<i>Others</i>	<i>Method</i>	<i>Conclusion</i>
Ozkan (2011)	390 non-financial companies FTSE All Share Index for the period 1999 to 2005.	Annual reports; Hemscott Guru, Data stream	Total director remuneration as the sum of cash, value of stock options, and value of stock awards (or LTIPs)	Shareholder Return; TQ	Board size; Ownership includes executive director, institutional, largest four, blockholder NEDs; proportion of NEDs; number of blockholders; CEO age; CEO tenure	Sales	Panel data with fixed year and fixed industry effects	CEO pay is higher with the following: company is larger, larger board size, higher proportion of NEDs. Institutional and blockholder ownership has a negative but significant impact on CEO pay level. TQ does not have significant impact on the level of CEO cash and total remuneration.

## Pay performance sensitivity and elasticity

Researchers have used two approaches to model the relationship between performance and pay. In the first approach, pay is treated as a linear function of performance:

### Equation 10.1

$$Pay_{it} = \alpha + \beta(Performance_{it}) + \mu_{it} \quad (1)$$

In Equation 10.1, the coefficient,  $\beta$ , is interpreted as the sensitivity of an executive's pay to the company's performance, or its pay performance sensitivity for company 'i' in year 't.' Empirical work that has examined this relationship of CEO pay and company performance has found the coefficient to be positive and significant (Garen 1994, 1176). In prior studies, researchers commonly used the pay of the company's highest paid director or aggregate board remuneration because there was no requirement under UK company law to disclose separate information (see Conyon *et al.* 1995, 708). In formulating their statistical models, researchers have chosen between current and lagged values, absolute values in monetary terms, logarithms and change in values for the relevant variables. The commonly used measure of remuneration is the aggregate of salary and bonus, (for example, Jensen and Murphy 1990; Conyon and Gregg 1994; Conyon 1997).

The measurement of performance for comparative purposes has been problematic, so researchers have used both market based performance measures such as shareholder return and accounting based company performance returns such as an accounting rate of return or earnings per share. Researchers have used shareholder return contemporaneously with the remuneration variable (Conyon 1997, 500), and others have used shareholder return as a lagged variable, (for example, Jensen and Murphy 1990; Gregg *et al.* 1993; Conyon and Gregg 1994). One reason for using the lagged shareholder return is to minimise the causality issue.

As noted above, some researchers have formulated the relationship between pay and performance using logarithms:

**Equation 10.2**

$$\ln(\text{Pay})_{it} = \alpha + \beta \ln(\text{Performance})_{it} + \mu_{it} \quad (2)$$

For example, Coughlan and Schmidt (1985) in Equation 10.2 have used logarithms (ln) and the estimated ‘ $\beta$ ’ coefficient as the elasticity of pay with respect to performance. Whereas Equation 10.1 reflects the sensitivity of pay to performance, Equation 10.2 reflects the elasticity of pay relative to performance. The model implied by Equation 10.2 is more realistic, as in practice we would not expect a linear relationship between performance and pay implied by Equation 10.1.

An in-depth review of the academic literature suggests that a direct relationship between CEO pay and company performance is complicated and difficult to establish. The consensus is that an assortment of moderators influences the relationship between pay and performance. Although the corporate governance structures of the UK and US are similar, there are significant differences. For example, the UK corporate governance is strongly influenced by the Cadbury Report (1992) recommendations such as separate individuals commonly hold the CEO and Chairman roles. Since 2002, the UK shareholders have voted annually on executive remuneration packages, although there is no evidence that say-on-pay proposals change the level or growth of CEO pay (for example, Ferri and Maber 2013). The result of this voting system is often unsatisfactory to executives, and though the vote is non-binding, companies abide by them. For example, shareholders of Royal Dutch Shell PLC, Royal Bank of Scotland Group, and Provident Financial PLC have voted against management remuneration plans.

Cheffins and Thomas (2001) suggest that the existence of structural differences between the UK and the US allow CEO remuneration to be researched in the context of legal, political, business culture and regulatory systems. As discussed in Chapter 6, both the UK and the US governance systems are market-based and

characterised as having diffused share ownership and liquid markets. This is in contrast to other countries where concentrated share ownership is the dominant form, and the market is relatively illiquid (Porta *et al.* 1997, 1137-1138). Therefore, in countries where ownership is widely dispersed, one should observe a strong correlation between executive pay and company performance as a way to reduce agency costs. One would expect that the dominant and individualistic nature of the US style managers as exemplified by their preference of huge remuneration packages to converge to other countries. This higher remuneration is associated mainly with the equity-based incentives. One question that arises is whether this form of incentive-based pay can cascade down to the UK directors. However, evidence suggests otherwise, and the US CEOs have higher pays and equity based incentives compared to the CEOs in the UK. The main difference is due to the higher share option practices in the US than in UK. Conyon and Murphy (2000, 667) suggest that the culture is one of the several factors that can account for the deviation between the UK and the US pay levels.

The institutional shareholders and their representative groups, for example, the Association of British Insurers (ABI), the National Association of Pension Funds (NAPF) and the Pension Investment Research Consultants (PIRC) have been influential in providing non-statutory policy guidelines for the UK companies. For example, the ABI guidelines require the UK companies to limit the issue of share options to four times the cash remuneration (Conyon and Murphy 2000; Conyon and Sadler 2001).

The above discussion suggests that corporate governance in the UK have been subject to considerable reforms on executive remuneration since the Cadbury 1992 report, but the question remains whether there is any association between the directors' pay and their companies' performance. The diversity of the empirical results, a significant increase in directors' remuneration and shareholders' rights has contributed to a large amount of scholarly literature on executive remuneration. However, one critique of executive remuneration to date is a lack of study involving small companies. In addition, agency theory and managerial theory are developed mainly within the US context (Boyd *et al.* 2012). Researchers interested in

understanding the determinants of CEO remuneration focus on the sensitivity of the CEO remuneration to company performance (see Equation 10.1) in large listed companies. As the natures of principal-agent conflicts are different between large and smaller sized companies, the determinants of the large companies may not necessarily be the same as that of the smaller, younger and growth companies. To date very few studies have exclusively provided evidence of such companies (see Barnes *et al.* 2006, 19).

### **10.5: Hypothesis Development**

The hypothesis for Chapter 10 consists of two parts: the first part explores the impact of performance, governance variables and company specific variables on executive remuneration. The second part examines the level of remuneration and the level of ownership concentration.

The primary focus is on the relationship between the CEO compensation and company performance although other factors are included in the model as control variables. The first hypothesis is that the board of directors rewards the CEO of the company for high company performance because this will maximise company value, and hence shareholder value. This hypothesis is a direct application of the principal-agent theory. Consistent with prior literature (for example, Doucouliagos *et al.* 2012) the expectation is that CEO pay to show a positive correlation with performance. Therefore, the first hypothesis in support of the agency argument that CEO pay will be associated to company performance. For robustness, alternative measures of executive remuneration are HPD and PAYT.

***Hypothesis 1: There is a positive relationship between executive remuneration and company performance measured as TQ.***

Tosi *et al.* (2000) through a meta-analysis review of the literature on CEO pay find that company size accounts for more than 40 percent of the variability in pay. Therefore, the second hypothesis that the executive remuneration will be influenced by the company size.

***Hypothesis 2: There is a positive relationship between executive remuneration and company size.***

Previous research, for example, Bebchuk *et al.* (2011); (Hu *et al.* 2013), use the ratio of CEO pay to the total remuneration of the top five executives within the top management team and call this ratio CEO Pay slice (CPS). The entrenchment hypothesis suggests that powerful CEOs find it easier to expropriate shareholder wealth reflecting agency problems and reduce company value and performance (Bebchuk *et al.* 2011). The Bebchuk *et al.* study find that there is a negative correlation between CEOTR and TQ. This may also raise problems of causation. This is because the correlation between CEOTR and TQ may reflect the tendency of lower valued companies to use high CEOTR in their pay practices rather than CEOTR and the factors it reflects bringing about a decrease in company value. They also find that CEOTR positively correlated to ROA. They explain that the CEO's compensation being more sensitive to performance than that of the other members of the board.

***Hypothesis 3: There is a negative relationship between the ratio of CEO pay to the total remuneration of the directors (CEOTR) to company performance measured by TQ or ROA.***

Agency theorists suggest a number of indirect ways to mitigate agency costs, and in turn lead to higher CEO pay. The means to reduce the agency costs are, for example, use of smaller boards (Yermack 1996) greater board independence, or CEO to hold ownership shares (McConnell and Servaes 1990). The more shares owned by the CEO; the greater would be the ability of the CEO to decide their own level of remuneration. Similarly, the more shares owned by the board of directors collectively, the abler the board is to resist pressure from outside shareholders to restrain the pay level of the CEO. This leads to the fourth, fifth and sixth hypothesis.

***Hypothesis 4: There is a positive relationship between CEOPAY and CEO share ownership.***

Similarly, the more shares owned by the board of directors collectively, the abler the board is to resist pressure from outside shareholders to restrain the pay level of the CEO. This leads to the fifth hypothesis.

***Hypothesis 5: There is a positive relationship between CEOPAY and directors' ownership.***

According to Hartzell and Starks (2003) institutional shareholders serve a monitoring role in the principal-agent relationship and, therefore, there is a negative relationship between the level of remuneration and the institutional shareholder ownership level.

***Hypothesis 6: There is a negative relationship between CEOPAY and institutional ownership.***

## **10.6: Variables**

### **Dependent Variables - Remuneration**

For each company in the sample, four measures of directors' remuneration are used: Total CEO Pay (CEOPAY), pay of the highest paid director (HPD)<sup>68</sup>, total remuneration of the whole board (PAYT) and the ratio of total CEO pay over total directors' remuneration (CEOTR).

#### ***CEO Remuneration (CEO PAY)***

The total annual remuneration includes CEO's salary, bonus, other remuneration, the total value of stock options granted and director fees if reported. Figure 10.3 shows that large differences in pay levels are attributable to the granting of stock options. Due to the small number of AIM companies using options, options as a separate variable, were not used. Agarwal (1981); Finkelstein and Boyd (1998);

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68 'the highest paid director' means the director to whom is attributable the greatest part of the total of the aggregates p. 118; section 10  
[http://www.legislation.gov.uk/uksi/2008/410/pdfs/ukxi\\_20080410\\_en.pdf](http://www.legislation.gov.uk/uksi/2008/410/pdfs/ukxi_20080410_en.pdf); accessed 6 January 2012

Tosi *et al.* (2000) show that the cash remuneration can be a proxy for total CEO pay and, therefore, there does not seem to be an issue in using CEO pay with different alternatives. Hence, as per Tosi *et al.* (2000, 307) if all the components of total pay were not available, total cash pay measured as salary plus bonus or the cash salary was used. Researchers often assume that the CEO remuneration as a proxy for senior executive remuneration within the company. However, Henderson and Fredrickson (2001) rebut this and suggest that there is variation among the executive pay of the senior board members. Henderson and Fredrickson use the tournament theory to suggest that the differences in pay exist as a means to both motivate and mitigate agency problems.

#### ***Highest paid director (HPD)***

Several researchers use the HPD as the dependent variable as this is both efficient and convenient (for example, Lewellen and Huntsman 1970, 714; Conyon and Peck 1998).

#### ***Total pay for all directors (PAYT)***

Similarly, to Ozkan (2007) PAYT is a measure of total pay for all directors on the board.

#### ***Total remuneration of the CEO over the total director remuneration (CEOTR)***

CEOTR is the ratio of the total remuneration of the CEO over the total directors' remuneration. Bebchuk *et al.* (2011) use a similar ratio. Their definition is the percentage of the CEO total remuneration to the top five executives' total remuneration. The size of the AIM companies does not always justify the presence of five executive directors and hence the denominator for this thesis includes total remuneration of all directors of the company.

### **Performance Variables**

Table 10.1 provides examples of different performance variables from previous remuneration studies. The rationale for including profits measure is that it is

an incentive that aligns the interest of the shareholders and the management in a principal-agent relationship.

Company performance and company size are the two most common predictors of executive pay (Tosi *et al.* 2000, 307). Following Mehran (1995), company performance measure includes a market measure, Tobin's Q (TQ) and an accounting measure, return on assets (ROA). The inclusion of ROA is seen to be important as researchers argue that accounting measure, ROA, is critical in determining executive remuneration (Antle and Smith 1986, 7). As per Chung and Pruitt (1996, 1140) it is hypothesised that a positive correlation between executive remuneration and TQ should be observed.

### **Control Variables**

The research on determinants of CEO pay and performance are strongly affected by the choice of the explanatory variables, which have varied from as low as two to more than twenty and the pay elements considered (Devers *et al.* 2007, 1021). The control variables that are company specific for this chapter include company size, cash holdings, leverage and capital expenditure scaled over total assets. Chapter 7 provides more details on these control variables and the definitions are shown in Table 10.2.

### **Corporate Governance Variables**

#### ***CEO ownership***

One of the ways of mitigating agency problems in a corporation is for the CEO to own shares in the company (see Jensen and Meckling 1976). Bebchuk and Fried (2004) argue that the executive compensation practices may not be in the interests of the shareholders because they are the product of managerial power. It is assumed that CEOs with higher share ownership will have greater power and thereby use it to benefit themselves in terms of higher remuneration. Research using US companies show mixed results and Holderness *et al.* (1999) has shown that higher CEO ownership has a negative influence on CEO remuneration.

### ***Director ownership***

Director ownership is the sum of all directors' shareholdings. The UK law has avoided making a distinction between insiders and outsiders, and, therefore, both the insider and outsider directors have equal liability. Hence, the UK's definition of a director can be either an executive (insider) or a non-executive director (outsider).

### ***Institutional ownership***

Institutional shareholding is the sum of all ownership holdings greater than 3% disclosed by institutional investors, such as pension funds. Hartzell and Starks (2003, 2352); Ozkan (2007) find institutional shareholders ownership level to have a negative relation to the level of executive remuneration.

### ***Board size***

Board size as a governance variable is preferred to independence. Since the board decides the level of executive remuneration, board independence particularly on the remuneration committee may be a factor in determining executive remuneration. The presence of independent directors is to reduce the managers' power over executive pay. However, for the AIM companies, the non-executive directors (NEDs) independence as characterised by the Higg's report is problematic since the independence of the NEDs may be questionable. This arises because the CEO may be an influencing factor in the selection of the NEDs, particularly when the CEO and the NED either know each other socially or have a business relationship. Additionally, where the non-executive directors themselves are executive directors of other listed companies, they will opt for higher remuneration levels (see Hermalin and Weisbach 1991).

Since the Higg's report, there has been a substantial change in the companies having a balanced board. Franks *et al.* (2001) argue that the non-executive directors' role is advisory rather than monitoring. In this context, the proportion of the non-executive directors will have no impact on the CEO remuneration. Empirical research on the relationship between board structural relationship and the level of executive pay is mixed. Gregory-Smith (2012) concludes that after controlling for the determinants of CEO pay and company fixed-effects their study fails to find any

evidence that increase in independent non-executive directors reduces CEO pay. In contrast, Capezio *et al.* (2011) finds a positive and significant relationship. However, for reasons mentioned above, independence as a variable was not used in the regression analysis.

### ***Founder***

Since, the companies in the sample are small and young; they are most likely to be run by the company's founder. The problems with a founder board member are that they will use their power to remain as the CEO or executive chair for several reasons such as securing the role for their heirs or attain disproportionate remuneration and perquisites. Alternatively, founder member may be willing to accept lower cash remuneration because they can gain from their share ownership or they want to hold on to the company they started. Anderson and Reeb (2003) use 500 S&P companies and find that companies run by founding families are more valuable and perform better than other companies. Therefore, the presence of the founder on the board will have a positive relationship with executive remuneration. I use dummy variables for a founder, equal to one if the founder is a paid executive, and zero otherwise. In this study, no difference was made whether the founder was a CEO or a member of the board.

### ***CEO/Chair duality role***

As per previous discussion, if a company's CEO holds the dual position of the company's executive chair, this may raise governance concerns in respect of a joint CEO-chair. The CEO power will enable him/her to demand higher remuneration for the dual role. The duality variable is a dummy variable equal to one if the roles of the CEO and the Chairman are separate and zero otherwise.

### **Control Variables**

Gabaix and Landier (2008, 65) consider three different proxies for company size: natural logarithm of market value measured as debt plus equity, earnings before interest and tax and sales revenue. Farmer *et al.* (2013, 92) use logarithm of sales

revenue lagged by one year. Consistent with Chapters 8 and 9, for this chapter the natural logarithm of total assets is a proxy for company size.

The other control variables include cash and cash equivalents over total assets, total liability over total assets and capital expenditure over total assets. All of these variables previously discussed in Chapter 7 and summarised in Table 10.2

**Table 10.2: Description of dependent and independent variables**

Variable	Units	Definition
<i>Remuneration Variables</i>		
CEOPAY	£,000	Chief Executive officer's total cash pay, bonus, options and others
HPD	£,000	Highest paid director's total cash pay
PAYT	£,000	Total remuneration of all directors
CEOTR	Percentage	Percentage of Chief Executive officer's total cash pay over total director cash pay
<i>Other Variables</i>		
TQ		Tobin's Q measured as ratio of [total assets plus market value of equity minus the shareholders' equity] over the total assets
ROA	Percentage	Return on Assets
MKVAL	£, Million	Market Capitalisation
CEO_OWNP	Percentage	The percentage of equity ownership owned by CEO
DIR_OWNP	Percentage	The percentage of equity ownership owned by directors
INST_OWNP	Percentage	The percentage of institutional ownership greater than 3%
SIZE		Natural logarithm of total assets
CASH/TA	Percentage	Ratio of total cash and cash equivalents over total assets as percentage
DEBT	Percentage	Ratio of total long and short term liabilities over total assets as percentage
PPE/TA	Percentage	The ratio of property, plant and equipment over total assets as percentage
BSIZE		Number of executive and non-executive members
DUMMYCEO		Dummy variable: if CEO/ chairman roles are separate is 1, otherwise 0
FOUNDER		Dummy variable: if a founder member of the board receives pay, then measured as 1, otherwise 0

## 10.7: Data

As a starting point, the sample is constructed by determining the ownership data available for the period 2006 to 2010. A list of 627 companies was provided to

S&P Capital IQ, who then downloaded the remuneration data for 615 companies. From this list, companies were deleted for the following reasons: lack of data on CEO or managing director remuneration (93); lack of computation of Tobin's Q value (106); lack of ownership data (7); negative shareholders' equity (30) and no data for debt, cash and cash equivalent and property, plant and equipment (182). The final data set consists of 197 companies. Non-UK currencies were converted to Great British pounds (GBP) using the year-end exchange rates for respective years. The S&P Capital IQ provided the exchange rates.

A manual check was conducted with a sample of 58 companies using the companies' annual reports to crosscheck the figures from the S&P Capital IQ. Annual reports were available from the company's website, Google & Northcote. The annual reports were searched for the following keywords: remuneration, compensation and salary. Data was available either in the notes to the accounts or the remuneration report. Where CEOs are not identifiable from the S&P Capital IQ data, the annual reports were used to verify CEOs. Terminology such as managing director (MD) is used if the CEO was not available. However, CEO/MD is not substituted for an executive chair, Chief Financial Officer (CFO) or the Chief Operating Officer (COO). Where companies showed several CEOs or MDs, the company's group figures are used

Any missing data for the CEO remuneration and financial data are checked against the annual reports. However, it was not always possible to get the data for the following reasons: the size of the companies did not justify a separate CEO, the CEO had resigned; and an Executive Chairman, the CFO or the COO carried out the responsibilities of the CEO. (Future research should extend the variable to include other key directors).

In particular, in the US the prominence of the CFO is growing, and his/her role is comparable to that of the CEO, (Zorn 2004). In addition, CEO-CFO role is further strengthened by the Sarbanes-Oxley Act of 2002 requirement for the US

listed company's CEO and CFO personally certify on the reliability of the financial statements.

## 10.8: Empirical Results

The executive remuneration packages contain the following components: cash salary, annual bonus, other remuneration, director fees, stock options granted and restricted stock options (not shown in the analysis, as there were only very few companies providing restricted stock options). Figure 10.1 shows the average directors' remuneration type over the period 2008 to 2010 from 615 AIM companies. Since the number of companies varies each year, the average values over the number of companies disclosing the amounts are shown. This figure shows that the majority of the companies have higher payments of the cash salary, followed by the bonus.

The figure 10.1 clearly indicates that the number of companies providing bonus element of remuneration has increased over the three years, in contrast to the salary, other remuneration and director fees, which have remained almost stagnant.

**Figure 10.1: Average Values for the Remuneration Structure**

Total 615 companies, for the period 2008-2010

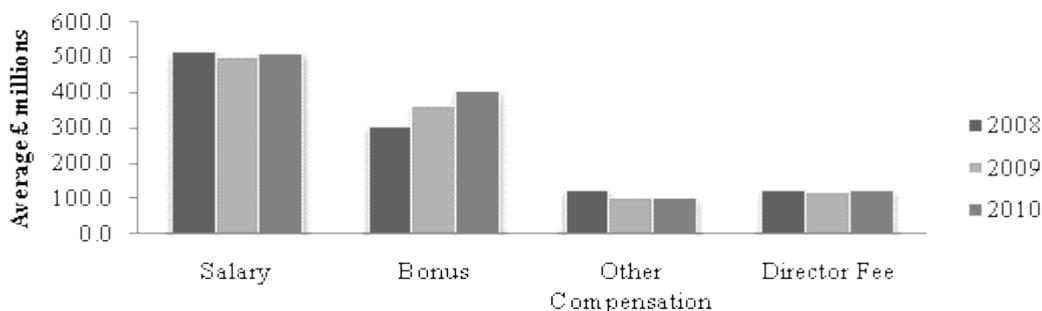
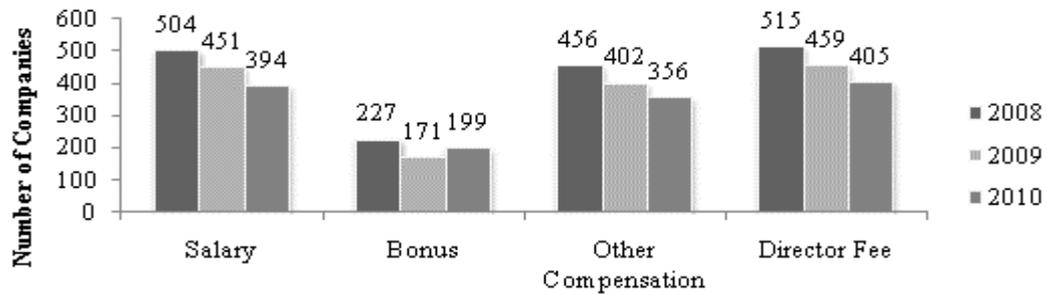


Figure 10.2 shows the actual number of companies disclosing the different components of remuneration structure

**Figure 10.2: Number of Companies Disclosing Different Remuneration Types**

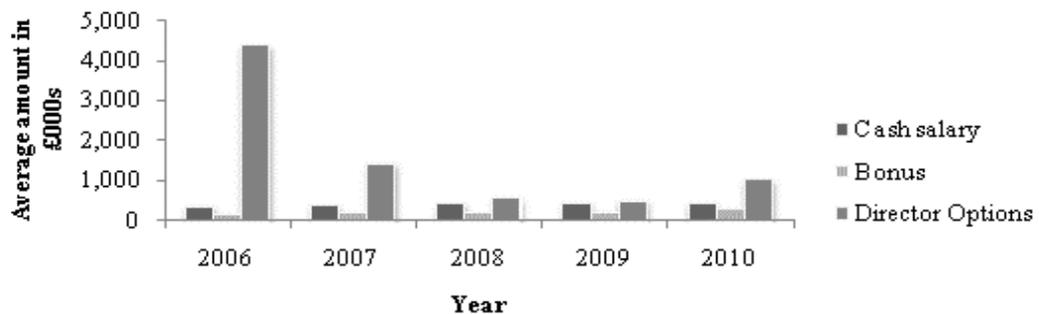
Total 615 companies, for the period 2008-2010



AIM companies have increased the amount of options granted to their directors and the average amount of options granted increased by 262.4% from £1.24 million to £4.88 million. The maximum value of total options granted in 2006 was £40.98 million and increased to £104.54 million in 2010. However, the total number of companies granting options is very low (see figure 10.3). Other empirical research shows growth in equity remuneration for board directors. For example, Farrell *et al.* (2008) show that there is a shift to from cash only remuneration to equity remuneration for data set from Fortune 500 companies from 1998 to 2004.

**Figure 10.3: Comparison of Cash Remuneration (Salary and Bonus) and Options granted**

615 companies for the period 2006-2010



***Descriptive statistics and correlation matrix***

Table 10.3, Panels A and B, shows the descriptive statistics for non-winsorised and winsorised variables, respectively. The mean value of CEO pay is £0.382 million, median value and largest CEO pay being £0.245 million and £19.16million, respectively. For the highest paid director, the mean value is £0.438

million and median and largest being £0.278 million and £19.16million, respectively. The mean value of TQ is 1.5, which is lower than both Dong and Ozkan (2008)'s 1.68 and Ozkan (2011)'s 1.78. Similarly, the median value of 1.1 is lower than Dong and Ozkan's 1.28. The mean and median of CEOTR are similar at 37.38% and 37.28%, respectively. However, the mean is higher than Bebchuk *et al.* (2011) who have a mean of 35.7%. CEO Pay ranged from a low of £0.01 million to a high of £19.16 million whereas the HPD amount ranged from a low of £0.028 million to high of £19.16 million. Market capitalisation has a mean value of £59.9 million and a median of £18.3 million. Ozkan (2011) has a mean market capitalisation of £1,824 million, clearly indicating the difference in the size of the companies in both studies. With all variables, except the DUMMYCEO, the mean is considerably larger than the median, showing that the distribution has a right-skewness. The univariate statistics show, when comparing the maximum values and the mean values, the presence of outliers. Furthermore, it is noticeable that the data set shows a large spread between the mean and the median values also indicating likely outliers hence the data are winsorised at 1% and 99%. This mitigates some of the potential biases of very large and very small remuneration packages.

**Table 10.3: Descriptive Statistics****197 AIM companies and 591 company-years, with no missing data, for the period 2008 to 2010.**

	<i>Units</i>	Mean	Median	Maximum	Minimum	Std. Dev.	Mean	Median	Maximum	Minimum	Std. Dev.
Variable		Panel A: non winsorised					Panel B: winsorised at 1% and 99%				
CEOPAY	£ 000s	381.59	245.00	19,156.52	11.17	881.23	347.68	245.00	3,192.29	15.82	377.74
HPD	£ 000s	438.54	277.71	19,156.52	28.07	895.16	413.34	277.71	4,463.56	71.00	478.98
CEOTR	%	37.38	37.28	82.73	0.71	14.95	37.36	37.28	77.46	1.23	14.88
PAYT	£ 000s	1,068.59	736.73	31,456.02	118.81	1,606.21	1,024.04	736.73	8,125.37	165.33	1,006.29
OPTIONS	£000s	220.79	0.00	12,852.68	0.00	858.07	207.82	0.00	6,452.70	0.00	708.60
TQ		1.50	1.11	12.65	0.19	1.19	1.50	1.11	7.64	0.43	1.13
ROA	%	-4.83	1.75	54.24	-218.85	24.91	-4.49	1.75	33.59	-102.33	22.06
AVROA	%	-6.30	0.81	43.04	-157.82	23.63	-6.30	0.81	26.72	-121.58	23.04
MKVAL	£ million	59.85	18.30	4,242.95	0.77	219.88	49.60	18.30	728.79	1.31	100.64
TA	£ million	73.38	30.17	3,871.23	1.46	205.18	62.50	30.17	471.69	1.57	88.88
CASHTA	%	20.83	14.23	95.54	-40.48	21.24	20.89	14.23	89.80	-0.30	20.98
DEBT	%	42.44	40.88	181.41	0.81	23.65	42.28	40.88	113.09	1.96	22.96
PPETA	%	17.54	6.32	98.72	0.02	23.01	17.51	6.32	93.34	0.05	22.92
CEOOWN	%	6.74	1.45	58.39	0.00	11.22	6.69	1.45	52.06	0.00	11.02
DIROWN	%	17.58	10.91	86.07	0.01	17.65	17.50	10.91	68.63	0.07	17.41
INSTOWN	%	35.25	33.49	98.46	0.00	21.42	35.16	33.49	85.50	0.00	21.21
FOUNDER	Binary	0.21	0	1	0	0.41	0.21	0	1	0	0.41
BSIZE		7.04	7	19	3	2.1	7.03	7	13	3.38	2.02
DUMMYCEO	Binary	0.66	1	1	0	0.47	0.66	1	1	0	0.47

**Table 10.4: Correlation Matrix**

197 AIM companies and 591 company-years, with no missing data over the period from 2008 to 2010. All variables winsorised at 1% and 99%.

	CEOPAY	HPD	CEOTR	PAYT	OPTIONS	TQ	ROA	AVROA	MKVAL	TA	CASHTA	DEBT	PPE/TA	CEOOWN	DIROWN	INSTOWN	FOUNDER	BFSIZE	DUMMYCEO	
CEOPAY	1.00																			
HPD	0.98	1.00																		
CEOTR	0.21	0.11	1.00																	
PAYT	0.90	0.96	-0.07	1.00																
OPTIONS	0.77	0.84	-0.02	0.87	1.00															
TQ	0.16	0.17	-0.06	0.20	0.22	1.00														
ROA	-0.02	-0.03	-0.03	-0.00	-0.00	-0.05	1.00													
AVROA	-0.04	-0.05	-0.03	-0.01	-0.03	-0.19	0.71	1.00												
MKVAL	0.40	0.44	-0.08	0.48	0.43	0.16	0.07	0.06	1.00											
TA	0.15	0.19	-0.06	0.24	0.19	-0.07	0.08	0.10	0.82	1.00										
CASHTA	0.06	0.08	-0.03	0.10	0.15	0.35	-0.12	-0.21	0.07	-0.06	1.00									
DEBT	-0.02	-0.05	0.09	-0.06	-0.10	-0.14	0.01	0.08	-0.14	0.03	-0.32	1.00								
PPE/TA	-0.05	-0.04	-0.15	-0.03	-0.05	-0.13	-0.02	0.01	-0.03	0.04	-0.32	0.03	1.00							
CEOOWN	-0.06	-0.07	-0.06	-0.06	-0.09	-0.05	0.11	0.15	0.01	0.08	-0.07	0.16	0.06	1.00						
DIROWN	-0.08	-0.09	-0.10	-0.10	-0.08	-0.08	0.13	0.20	-0.08	-0.06	-0.07	0.22	-0.01	0.56	1.00					
INSTOWN	0.06	0.07	0.07	0.09	0.05	-0.03	0.06	0.08	0.07	0.06	0.01	-0.03	-0.02	-0.25	-0.46	1.00				
FOUNDER	0.14	0.15	-0.05	0.18	0.18	0.16	-0.11	-0.15	0.13	0.11	0.18	-0.07	-0.10	0.02	0.08	-0.07	1.00			
BFSIZE	0.08	0.11	-0.31	0.20	0.09	0.09	-0.12	-0.11	0.16	0.17	0.11	-0.06	-0.00	-0.08	-0.08	0.11	0.07	1.00		
DUMMYCEO	0.09	-0.00	0.55	-0.08	-0.07	-0.12	0.03	0.04	-0.07	-0.03	-0.06	0.06	-0.11	0.02	-0.06	0.01	-0.08	-0.15	1.00	

## Executive remuneration, company performance and ownership holdings

This section focuses to explain the level of executive remuneration, company performance and ownership shareholdings. The definition of each variable is shown in Table 10.2. The following models are used:

### Model 1

$$CEOPAY = \alpha_0 + \beta_1 TQ + \beta_2 LOG(ta) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \varepsilon \quad (1)$$

### Model 2

$$HPD = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \varepsilon \quad (2)$$

### Model 3

$$PAYT = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \varepsilon \quad (3)$$

### Model 4

$$CEOTR = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \varepsilon \quad (4)$$

### Model 5

$$CEOPAY = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \beta_9 CEO\_OWNP + \varepsilon \quad (5)$$

### Model 6

$$CEOPAY = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \beta_9 DIR\_OWNP + \varepsilon \quad (6)$$

### Model 7

$$CEOPAY = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \beta_9 INST\_OWNP + \varepsilon \quad (7)$$

### Model 8

$$CEOPAY = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \beta_9 CEO\_OWNP + \beta_{10} INST\_OWNP + \varepsilon \quad (8)$$

### Model 9

$$\begin{aligned} CEOPAY = & \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \\ & + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \beta_9 DIR\_OWNP + \\ & + \beta_{10} INST\_OWNP + \varepsilon \end{aligned} \quad (9)$$

Tables 10.5 and 10.6 show the results of different variants of remuneration regressed against TQ, control variables and governance variables, without and with company fixed-effects, respectively.

With fixed-effects, all the coefficients are lower except with the founder and R-squared is above 70%.

### ***Executive Remuneration (CEOPAY, HPD, and PAYT) regression on performance, TQ and ROA***

Table 10.5 shows the relationship between CEOPAY, HPD and PAYT, as the dependent variables, and TQ is positive and statistically significant. The positive coefficient are in line with the hypothesised sign and the existing literature (see Dong and Ozkan 2008, 25; Sapp 2008, 729). However, Ozkan (2011, 271, 272) find that the TQ has a negative coefficient and statistically insignificant impact on the levels of CEO cash, and total remuneration, but she does find a positive coefficient and statistically significant result using shareholder return variable as the company performance measure. Ozkan (2011) results contrast the findings of Ozkan (2007) that show that shareholder return has a positive coefficient but statistically insignificant influence on CEO cash pay, and total remuneration. However, Ozkan (2007, 358-360) show a positive coefficient and significant impact of TQ with CEO cash pay, equity based pay and total remuneration.

Table 10.6 shows that the coefficients for the levels of CEOPAY, HPD and PAYT are negative and statistically insignificant with ROA as the explanatory variable. This is counter intuitive as it means that the companies with lower ROA pay their executives higher salaries than those with higher ROA. This suggests that the CEO pay estimation is dependent on the measure of company performance variable, and firms with higher growth opportunities pay their executives higher compensation. Therefore, hypothesis 1 is consistent with TQ but not the accounting measure of performance, ROA. Interestingly, Sapp (2008, 729) finds a significant

negative relationship with compensation and ROA. Therefore, the association between remuneration and performance may be context related, since Sapp (2008) uses a sample of the large listed Canadian companies.

### ***Remuneration and company characteristics***

The results show that the association between executive remuneration and company size is positive and statistically significant. This confirms the univariate analysis that the company size has a positive impact on executive pay. This suggests that the executive directors have higher pay levels for larger companies. The results are consistent with fixed-effects. The company size has a higher impact on pay, compared to TQ since the absolute coefficients for the company size; LOG (TA), is greater than that of TQ in Models 1 to 4. The significant and positive association between executive compensation and company size is consistent with previous studies (Canyon and Murphy 2000; Ozkan 2007, 361; Guest 2010). Table 10.7 shows that the company size explains between 11%, 12% and 20% of the variation in the regressions using CEOPAY, HPD and PAYT, respectively, but only 3% for CEOTR.

The regression results in Table 10.5 show that the level of executive remuneration is positive with an increase in cash holdings, CASH/TA, but is statistically insignificant except for PAYT when it is weakly significant. The results are consistent with fixed-effects. Table 10.6, the association between the dependent variables, CEOPAT, HPD and PAYT, and CASH/TA is positive and statistically significant with and without fixed-effects.

Table 10.5, with DEBT, the results are mixed. The coefficient is positive with CEOPAY and statistically significant. Bebchuk *et al.* (2011) explain the positive association that when debt is high, the CEO might need more remuneration. With HPD and PAYT, the coefficients are negative and statistically insignificant. Adding fixed-effects, Panel B, all the coefficients are negative and statistically insignificant. The CEO may have greater power to secure higher remuneration as results are different with HPD and PAYT.

Table 10.5, Panel A, the association of executive remuneration with PPE/TA is negative and statistically significant. This suggests that the executive management prefer to maintain their level of remuneration with less investment in property, plant and equipment. However, with fixed effect Panel B, the coefficient for CEOPAY changes to positive and is statistically insignificant. HPD and PAYT coefficient remains negative but is statistically insignificant. With ROA, Table 10.6, the results are similar.

### ***Remuneration and governance variables***

Results show that DUMMYCEO impact on remuneration is mixed. Using fixed-effects, it is significant with all definitions of executive remuneration. One explanation could be that the additional cost of having the two roles of the CEO and chairman separate does not decrease CEO pay, and this is obvious when compared to CEOTR used as the dependent variable. Therefore, if the chairman provides weak or no monitoring of the CEO PAY, then is there any reason to keep the two roles separate?

With the FOUNDER, the coefficients are positive and statistically significant in Table 10.5 Panel A. With the fixed-effects, the coefficients are larger and remain statistically significant. This result is consistent for ROA in Table 10.6 Panel A. With fixed-effects, the coefficients are lower, and CEOPAY is no longer significant. This suggests that the Founder as a CEO or member of the board have relatively higher say on the remuneration of the directors.

The results in Table 10.5 the relationship between executive remuneration and board size is mixed. The results show a positive and weak statistically significant, at 10%, relationship with CEOPAY and HPD, but moderately significant with PAYT. This result is similar to that by Ozkan (2007); Guest (2010). With fixed-effects, the coefficient is positive but not statistically significant with CEO and HPD, but statistically significant with PAYT. With ROA, the results are similar without fixed-effects, but no longer statistically significant with fixed-effects. The assumption is that firms with large board size would show a higher proportion of

non-executive directors. The results show that large boards offer higher remuneration to CEOs, HPD or the board. The results suggest that the CEO is more powerful and able to obtain higher remuneration due to poor disciplinary function of the non-executive directors. Thus, the results suggest that larger boards are less effective in monitoring and more susceptible to influence of CEO power (see Ozkan, 2007).

### ***The relationship between CEOTR and TQ***

This section discusses the empirical results for AIM companies concerning the relationship between CEOTR and firm performance, TQ and ROA. The regressions include some of the standard controls used by Bebchuk *et al.* (2011). Their measure of TQ is the ratio of the market to book value of the company.

With CEOTR, Table 10.5 Panel A, the coefficient with TQ is positive and statistically insignificant, but with the inclusion of fixed-effects, the coefficient direction changes to negative and is statistically significant. Panel A results show that CEOTR is negative and statistically significant association with LOG (TA), PPE/TA and BSIZE, but positive and statistically significant association with DEBT and DUMMYCEO. With CASH/TA and FOUNDER, there is no relationship. Table 10.5 Panel B with fixed effect, the coefficient with TQ is negative and statistically significant. The results show that CEOTR is positively associated with LOG (TA), PPE/TA and DUMMYCEO. CEOTR shows no relationship with CASH/TA, DEBT, FOUNDER and BSIZE.

Table 10.6 Panel A, the regression of CEOTR on ROA gives a negative and statistically significant coefficient. The results show a negative and statistically significant association between CEOTR with LOG (TA), PPE/TA and BSIZE. The results show association between CEOTR with DEBT and DUMMYCEO is positive and statistically significant. With DEBT and FOUNDER, there is no relationship. Table 10.6 Panel B with fixed effect, the coefficient with ROA is positive and statistically insignificant. This contrasts the findings of Bebchuk *et al.* (2012) who find a positive correlation between CEOTR and performance. The results show that

CEOTR is positively associated with LOG (TA), PPE/TA and the DUMMYCEO. With the remaining control variables, there is no association.

Using the DUMMYCEO control variable equal to one if the CEO and Chairman roles are not combined. The regression with the DUMMYCEO, as an explanatory variable, shows that when the CEO roles and the Chairman roles are separate, the coefficient is positive and statistically significant. Other results show that show the combination of the two roles has higher CEO remuneration include Core *et al.* (1999); Conyon and Murphy (2000); Bebchuk *et al.* (2011)

Inclusion of board size, the coefficient of the board size is negative with both TQ and ROA as the main explanatory variable. The board size variable is not statistically significant when fixed-effects are included. The larger board size indicates that there are more non-executive directors thus monitoring the CEO PAY or the board pay is high.

Inclusion of DEBT, the coefficient is positive with both TQ and ROA, however the statistical significance is observed when firm fixed-effects are not included. The inclusion of fixed-effects, the coefficient on performance is negative and statistically insignificant.

**Table 10.5: OLS Regressions of Executive Remuneration on TQ**

$$Pay = \alpha_0 + \beta_1 TQ + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \varepsilon$$

Winsorised at 1% and 99%; Cross-sections included 197; White cross-section

Model	Panel A: Without Fixed-effects				Panel B With Fixed-effects			
	1	2	3	4	1	2	3	4
Dep. Var:	CEOPAYHPD	PAYT	CEOTR	CEOTR	CEOPAYHPD	PAYT	CEOTR	CEOTR
C	-478.20 [-5.23]**	-451.15 [-3.38]**	-1115.26 [-4.80]**	39.74 [25.30]**	-288.35 [-2.76]**	-309.89 [-5.12]**	-543.47 [-12.19]**	28.37 [6.06]**
TQ	93.26 [8.06]**	118.32 [7.78]**	258.21 [12.29]**	0.16 [0.80]	87.93 [7.22]**	121.21 [9.85]**	244.16 [19.03]**	-0.13 [-6.47]**
LOG(TA)	127.05 [9.95]**	167.86 [9.18]**	405.69 [12.60]**	-0.55 [-3.97]**	112.38 [3.66]**	151.19 [3.49]**	270.18 [2.63]**	2.04 [8.94]**
CASHTA	0.51 [1.10]	0.97 [1.54]	2.55 [2.33]*	-0.00 [-0.04]	0.03 [0.07]	1.62 [1.31]	7.55 [4.13]**	-0.01 [-0.57]
DEBT	0.96 [2.52]*	-0.05 [-0.09]	-0.37 [-0.48]	0.03 [40.90]**	-1.15 [-1.51]	-1.74 [-1.23]	-1.72 [-0.43]	-0.02 [-0.77]
PPE/TA	-1.27 [-4.78]**	-1.60 [-4.96]**	-3.17 [-2.87]**	-0.06 [-8.08]**	0.89 [1.44]	-1.31 [-0.83]	-2.77 [-0.54]	0.08 [2.76]**
DUMMYCEO	167.62 [5.23]**	28.89 [1.19]	-157.12 [-4.86]**	15.92 [18.35]**	39.36 [12.58]**	-89.70 [-6.41]**	-189.88 [-3.92]**	8.71 [7.47]**
FOUNDER	130.16 [11.44]**	179.30 [4.83]**	379.88 [4.37]**	-0.36 [-0.94]	206.84 [3.01]**	383.87 [9.45]**	571.25 [5.60]**	0.05 [0.01]
BSIZE	12.93 [2.20]*	10.71 [1.98]*	61.00 [6.37]**	-1.61 [-7.65]**	12.69 [0.88]	10.65 [1.44]	37.36 [2.07]*	-0.53 [-1.71]
Observations:	591	591	591	591	591	591	591	591
R-squared:	0.27	0.26	0.38	0.37	0.75	0.70	0.73	0.87
F-statistic:	26.32	24.96	44.12	43.28	5.64	4.36	5.19	12.31

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

**Table 10.6: OLS Regressions of Executive Remuneration on ROA**

$$PAY = \alpha_0 + \beta_1 ROA + \beta_2 LOG(TA) + \beta_3 CASH/TA + \beta_4 DEBT + \beta_5 PPE/TA + \beta_6 DUMMYCEO + \beta_7 FOUNDER + \beta_8 BSIZE + \varepsilon$$

Winsorised at 1% and 99%; Cross-sections included 197; White cross-section

Models	Panel A: Without Fixed-effects				Panel B With Fixed-effects			
	1	2	3	4	1	2	3	4
Dep. Var:	CEOPAY	HPD	PAYT	CEOTR	CEOPAY	HPD	PAYT	CEOTR
C	-330.14 [-4.92]**	-263.67 [-2.77]**	-702.51 [-4.07]**	39.91 [30.03]**	-211.51 [-1.65]	-233.33 [-2.18]*	-403.63 [-2.93]**	28.48 [5.17]**
ROA	-1.16 [-1.96]	-1.70 [-1.98]*	-1.41 [-0.64]	-0.05 [-2.96]**	-0.45 [-0.49]	-1.46 [-1.12]	-3.37 [-1.49]	0.01 [0.26]
LOG(TA)	114.37 [9.03]**	152.97 [9.57]**	361.22 [12.72]**	-0.32 [-5.40]**	119.83 [3.39]**	171.05 [3.62]**	314.90 [2.82]**	1.96 [3.66]**
CASHTA	1.76 [2.82]**	2.53 [3.07]**	6.18 [3.90]**	-0.00 [-0.17]	1.40 [5.30]**	3.65 [3.49]**	11.70 [9.64]**	-0.01 [-0.59]
DEBT	0.84 [3.09]**	-0.21 [-0.54]	-0.69 [-0.88]	0.02 [17.76]**	-0.24 [-0.45]	-0.84 [-0.90]	-0.07 [-0.02]	-0.02 [-1.12]
PPETA	-1.41 [-6.49]**	-1.81 [-7.01]**	-3.33 [-3.51]**	-0.06 [-14.46]**	0.10 [0.34]	-2.30 [-1.55]	-4.72 [-0.95]	0.08 [2.40]*
DUMMYCEO	147.09 [4.76]**	2.62 [0.12]	-212.18 [-6.35]**	15.84 [18.19]**	26.82 [3.05]**	-106.81 [-17.01]**	-224.26 [-9.09]**	8.73 [7.46]**
FOUNDER	148.10 [6.78]**	200.97 [3.82]**	438.02 [3.67]**	-0.56 [-1.15]	54.59 [1.09]	176.00 [2.99]**	153.50 [1.28]	0.25 [0.06]
BSIZE	15.84 [2.53]*	13.95 [2.42]*	72.66 [8.35]**	-1.70 [-7.34]**	14.70 [1.04]	13.82 [1.91]	43.94 [2.48]*	-0.54 [-1.66]
Observations:	591	591	591	591	591	591	591	591
R-squared:	0.21	0.20	0.31	0.38	0.73	0.68	0.72	0.87
F-statistic:	19.01	17.99	32.81	44.20	5.21	4.03	4.81	12.31

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

**Table 10.7: Regression of executive remuneration and company size**

Winsorised at 1% and 99%; Cross-sections included 197; 591 observations. White cross-section; Without Fixed-effects

Dep. Var:	CEOPAY	HPD	PAYT	CEOTR
C	15.90 [0.53]	-22.52 [-0.53]	-133.47 [-1.26]	43.73 [35.93]**
LOG(TA)	98.36 [8.20]**	129.22 [7.47]**	343.16 [11.68]**	-1.89 [-10.53]**
R-squared:	0.11	0.12	0.19	0.03
F-statistic:	72.49	78.52	136.33	15.77

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

### ***Remuneration and ownership variables***

Table 10.8 Panel A, without fixed-effects, shows the regression results of CEOPAY on the level of CEO ownership, director ownership and institutional ownership. With increasing CEO ownership (Model 5), the coefficient is negative and statistically significant. The direction and the statistical significance remain with the inclusion of the institutional ownership (Model 8) in the regression, but the value of the coefficient is lower. For the Models 5 and 8 with fixed-effects, Panel B, CEO\_OWNP is not statistically significant.

With director ownership (Model 6), the regression shows a negative coefficient and statistically significant, and with the inclusion of institutional ownership (Model 9), the coefficient is negative and statistically significant. With the fixed-effects, the coefficient becomes positive in both models and remains statistically significant.

In Models 8 and 9, CEOPAY shows no statistical association with institutional ownership. This finding is consistent with that of Dong and Ozkan (2008, 25). The findings are in line with Cosh and Hughes (1997) who use a dummy variable for institutional investors and find that the coefficient is insignificant and hence has no impact on the level of CEO PAY. However, Ozkan (2007); (2011) find that there is a negative and significant relationship between CEO pay measures, cash and total remuneration, and the level of institutional shareholder ownership. Ozkan's sample consists of large UK companies, and institutional shareholders maybe showing more attention to the larger companies and less to the smaller companies on AIM. Ozkan (2011) using CEO pay-performance sensitivity of option grants for large UK non-financial companies finds a positive and significant influence for institutional ownership. The variation in the results, in Table 10.8 and those by Ozkan, suggests that the size of the company and the remuneration measure matter. Overall, the beta coefficients of the explanatory variables TQ, LOG (TA), DUMMYCEO and FOUNDER are positive and statistically significant, indicating their critical importance as determinants of executive remuneration. DEBT is positive and statistically significant in Panel A and not in Panel B. PPE/TA is negative and statistically significant in Panel A without fixed-effects.

**Table 10.8: OLS Regressions of Remuneration, TQ and Ownership**

Dependent Variable : CEOPAY: All variables are winsorised at 1% and 99%; Cross-sections included 197; 591 observations . OLS regressions include White cross-section

Model	5	6	7	8	9	5	6	7	8	9
	Panel A: without fixed-effects					Panel B: with fixed-effects				
C	-459.91 [-5.27]**	-452.25 [-4.77]**	-495.41 [-5.39]**	-467.17 [-5.41]**	-471.16 [-4.96]**	-290.71 [-3.29]**	-363.14 [-3.18]**	-246.19 [-2.08]*	-243.93 [-2.37]*	-318.16 [-2.60]**
TQ	93.06 [8.41]**	91.41 [7.99]**	92.93 [8.28]**	92.95 [8.53]**	91.72 [7.94]**	87.97 [7.35]**	87.42 [7.15]**	86.92 [6.45]**	86.88 [6.56]**	86.52 [6.47]**
LOG(TA)	129.02 [9.71]**	124.23 [9.37]**	124.11 [8.62]**	127.83 [8.46]**	123.08 [8.62]**	112.63 [3.70]**	120.60 [3.57]**	114.99 [3.49]**	114.78 [3.56]**	122.35 [3.49]**
CASH/TA	0.54 [1.18]	0.50 [1.08]	0.49 [0.97]	0.53 [1.09]	0.48 [0.99]	0.04 [0.07]	0.15 [0.30]	-0.04 [-0.12]	-0.05 [-0.12]	0.07 [0.17]
DEBT	1.27 [3.09]**	1.16 [3.18]**	0.99 [2.54]*	1.27 [3.05]**	1.12 [2.99]**	-1.16 [-1.50]	-1.19 [-1.44]	-1.23 [-1.27]	-1.23 [-1.28]	-1.26 [-1.26]
PPE/TA	-1.19 [-4.49]**	-1.26 [-4.86]**	-1.23 [-4.32]**	-1.17 [-4.21]**	-1.23 [-4.40]**	0.89 [1.42]	0.71 [1.08]	0.78 [1.12]	0.78 [1.11]	0.63 [0.88]
DUMMYCEO	168.36 [5.72]**	164.16 [5.05]**	166.44 [4.93]**	167.88 [5.46]**	164.37 [4.97]**	39.35 [12.31]**	40.22 [7.94]**	36.10 [94.68]**	36.10 [82.32]**	37.14 [19.25]**
FOUNDER	135.63 [12.08]**	135.27 [13.30]**	133.27 [13.13]**	136.60 [12.67]**	135.87 [13.96]**	207.28 [2.90]**	195.37 [3.08]**	211.76 [2.78]**	211.37 [2.68]**	200.83 [2.86]**
BSIZE	10.92 [1.72]	12.75 [2.15]*	12.45 [2.12]*	10.81 [1.73]	12.48 [2.15]*	12.73 [0.89]	12.08 [0.84]	14.32 [1.05]	14.29 [1.06]	13.63 [1.01]
CEO_OWNP	-4.08 [-7.14]**			-3.92 [-4.71]**		0.21 [0.15]			-0.19 [-0.12]	
DIR_OWNP		-1.10 [-7.91]**			-0.79 [-2.63]**		3.22 [3.23]**			2.96 [4.03]**
INST_OWNP			0.85 [1.69]	0.32 [0.58]	0.56 [0.96]			-1.51 [-1.68]	-1.51 [-1.66]	-1.39 [-1.76]
R-squared:	0.28	0.27	0.27	0.28	0.27	0.75	0.75	0.75	0.75	0.75
F-statistic:	25.01	23.63	23.61	22.50	21.31	5.59	5.63	5.63	5.59	5.62

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

The next section repeats Model 5 to 9 using ROA as the performance measure. Table 10.9 Panel A shows that the regressing the CEO remuneration gives a negative coefficient for CEOPAY on CEO\_OWNP and is statistically significant, and the results remain consistent with Model 8 with the inclusion of institutional ownership holdings. However, the t-statistics is much lower. With the fixed-effects, the CEO\_OWNP is no longer statistically significant. The negative coefficient suggest with the CEO\_OWNP indicates that the CEOPAY reduces with increase in the CEO shareholdings. One can explain that the CEO is not concerned with the cash element of the remuneration package and other perquisites may be more significant to them.

Table 10.9 Panel A shows that the coefficient for total director ownership holdings is negative and statistically significant. With the inclusion of the fixed-effects, Panel B, the coefficient with DIR\_OWNP becomes positive and is still statistically significant. This indicates that the directors as a group are influential in deciding their pay package.

Table 10.9 Panel A, Model 7 – the coefficient with institutional shareholding is positive and statistically insignificant. With the inclusion of fixed-effects, the coefficient for institutional shareholdings becomes negative and statistically significant (as predicted in hypothesis 6). The results suggest that institutional investors in AIM companies play a complementary role on the CEO or director ownership holdings and provide a substitute -monitoring role for CEOPAY

**Table 10.9: OLS regressions of CEO remuneration, ROA and ownership**

Dependent Variable : CEOPAY: All variables are winsorised at 1% and 99%; Cross-sections included 197; 591 observations . OLS regressions include White cross-section

Model	Panel A: Without Fixed-effects					Panel B: With Fixed-effects				
	5	6	7	8	9	5	6	7	8	9
C	-312.51 [-4.97]**	-299.77 [-4.40]**	-349.51 [-5.14]**	-322.45 [-5.14]**	-316.82 [-4.67]**	-205.90 [-1.86]	-295.09 [-2.04]*	-166.52 [-1.19]	-154.97 [-1.29]	-245.92 [-1.59]
ROA	-0.95 [-1.58]	-0.93 [-1.54]	-1.15 [-1.97]*	-0.96 [-1.56]	-0.97 [-1.47]	-0.45 [-0.49]	-0.48 [-0.54]	-0.56 [-0.65]	-0.57 [-0.66]	-0.58 [-0.68]
LOG(TA)	115.19 [8.79]**	109.97 [8.66]**	111.19 [7.67]**	113.67 [7.49]**	109.11 [7.90]**	119.26 [3.39]**	129.20 [3.36]**	124.17 [3.32]**	123.14 [3.34]**	132.43 [3.34]**
CASH/TA	1.81 [2.87]**	1.73 [2.78]**	1.73 [2.58]*	1.79 [2.69]**	1.72 [2.63]**	1.39 [5.35]**	1.52 [4.34]**	1.31 [6.61]**	1.30 [7.31]**	1.42 [5.00]**
DEBT	1.14 [3.81]**	1.10 [3.88]**	0.86 [2.98]**	1.13 [3.71]**	1.06 [3.74]**	-0.23 [-0.41]	-0.31 [-0.50]	-0.40 [-0.54]	-0.38 [-0.50]	-0.45 [-0.57]
PPE/TA	-1.30 [-5.94]**	-1.37 [-6.46]**	-1.36 [-5.65]**	-1.28 [-5.42]**	-1.35 [-5.82]**	0.11 [0.37]	-0.09 [-0.25]	-0.00 [-0.00]	0.01 [0.08]	-0.16 [-0.94]
DUMMYCEO	148.06 [5.18]**	143.30 [4.60]**	145.88 [4.45]**	147.44 [4.90]**	143.41 [4.53]**	26.88 [2.98]**	27.85 [3.29]**	23.13 [2.24]*	23.19 [2.20]*	24.32 [2.60]**
FOUNDER	154.33 [7.17]**	155.25 [7.45]**	151.44 [7.45]**	155.54 [7.54]**	155.62 [7.61]**	53.67 [1.06]	43.11 [0.86]	62.80 [1.25]	61.14 [1.18]	51.76 [1.10]
BSIZE	14.32 [2.16]*	15.93 [2.57]*	15.31 [2.47]*	14.16 [2.18]*	15.62 [2.62]**	14.61 [1.04]	14.03 [1.00]	16.66 [1.24]	16.52 [1.23]	15.92 [1.19]
CEO_OWNP	-3.93 [-6.14]**			-3.71 [-3.98]**		-0.53 [-0.30]			-1.03 [-0.56]	
DIR_OWNP		-1.44 [-33.53]**			-1.14 [-2.56]*		3.52 [3.81]**			3.21 [4.26]**
INST_OWNP			0.92 [1.63]	0.43 [0.68]	0.51 [0.72]			-1.79 [-2.80]**	-1.82 [-2.83]**	-1.67 [-3.08]**
R-squared:	0.22	0.21	0.21	0.22	0.21	0.73	0.73	0.74	0.74	0.74
F-statistic:	18.17	17.27	17.13	16.37	15.57	5.17	5.20	5.21	5.17	5.20

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

## 10.9: Robustness

In the next section, Models 1 to 4 are repeated using the market capitalisation, MKVAL, as an alternative measure of the company size. The results show that the coefficient is positive and statistically significant for all measure of executive remuneration.

**Table 10.10: OLS Regressions of Remuneration and MKVAL**

All variables are winsorised at 1% and 99%; Cross-sections included 197; 591 observations. OLS regressions include White cross-section  
MKVAL is used as a measure of company size

### With Fixed-effects

Model	1	2	3	4
Dep. Var:	CEOPAY	HPD	PAYT	CEOTR
C	-144.32 [-1.50]	-64.04 [-1.01]	-159.95 [-0.62]	30.75 [8.12]**
LOG(MKVAL)	110.64 [15.24]**	137.57 [9.06]**	272.19 [7.52]**	1.26 [9.05]**
CASH/TA	0.58 [1.94]	2.41 [2.41]*	9.31 [6.25]**	-0.03 [-1.33]
DEBT	-0.22 [-0.22]	-0.42 [-0.26]	1.05 [0.24]	-0.03 [-1.19]
PPETA	1.62 [4.07]**	-0.65 [-0.43]	-1.04 [-0.20]	0.08 [2.96]**
DUMMYCEO	29.48 [13.95]**	-102.91 [-7.78]**	-218.42 [-5.01]**	8.80 [7.64]**
FOUNDER	173.44 [3.51]**	313.87 [9.25]**	439.61 [6.10]**	1.41 [0.31]
CEOOWN	0.43 [0.35]	-0.75 [-0.24]	-2.36 [-0.31]	0.15 [2.51]*
BSIZE	10.44 [0.80]	7.88 [1.37]	31.79 [2.05]*	-0.56 [-1.87]
R-squared:	0.75	0.69	0.73	0.87
F-statistic:	5.54	4.22	5.04	12.37

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively.

The second robustness uses the logarithm of the dependent variable, pay and the explanatory variable, performance (see Equation 10.2). This logarithm procedure mitigates heteroskedasticity resulting from extreme skewness. Table 10.11 (PANEL A) shows the results of the regression of the LOG (PAY) on LOG (TQ). The

coefficient is positive and statistically significant with all four measures of pay. The R-squared is higher than in regressions that did not use the logarithm form for pay and performance. Gabaix and Landier (2008) measure the elasticity by regressing the natural logarithm of total pay of the CEO to the logarithm of the market capitalisation. Their data contains the top 1,000 companies of the ExecuComp data for the period 1992 to 2004 and find that the coefficient is 0.37 without fixed-effects and reduces to 0.26 with company fixed effect. They use the market capitalisation as a measure of company size. Table 10.1, Panel A, shows that the coefficient of the regression of the logarithm of CEOPAY on logarithm of TQ gives a positive coefficient of 0.4 without fixed-effects in the regression. With the inclusion of fixed-effects, Panel B shows that the coefficient reduces to 0.24. These results are in line with that of Gabaix and Landier (2008).

Table 10.11 Panel B shows that the regression of logarithm CEOPAY, HPD and PAYT on logarithm of TQ has a positive and statistically significant coefficient, but with CEOTR the coefficient is no longer statistically significant.

**Table 10.11: OLS Regressions Using Logarithms of Pay and Performance**

Dependent Variable: CEOPAY: All variables are winsorised at 1% and 99%; Cross-sections included 197; 591 observations. OLS regressions include White cross-section

Model	Panel A: Without Fixed-effects				Panel B: With Fixed-effects			
	1	2	3	4	1	2	3	4
Dep. Var: Natural logarithm	CEOPAY	HPD	PAYT	CEOTR	CEOPAY	HPD	PAYT	CEOTR
C	4.05 [51.96]**	4.43 [32.56]**	5.02 [53.37]**	3.63 [292.79]**	4.49 [28.27]**	4.85 [46.36]**	5.84 [65.86]**	3.24 [47.00]**
LOG(TQ)	0.40 [13.65]**	0.38 [7.77]**	0.37 [12.40]**	0.04 [4.53]**	0.24 [5.93]**	0.21 [3.89]**	0.23 [4.70]**	0.03 [1.86]
LOG(TA)	0.31 [25.56]**	0.34 [22.19]**	0.34 [26.34]**	-0.03 [-11.92]**	0.25 [10.34]**	0.25 [5.34]**	0.19 [3.57]**	0.07 [2.15]*
CASH/TA	-0.00 [-2.67]**	0.00 [1.84]	-0.00 [-0.26]	-0.00 [-2.58]*	-0.00 [-1.71]	0.00 [4.34]**	0.00 [4.26]**	-0.00 [-4.08]**
DEBT	0.00 [2.78]**	-0.00 [-0.42]	0.00 [0.49]	0.00 [6.75]**	-0.00 [-3.21]**	-0.00 [-1.43]	-0.00 [-1.27]	-0.00 [-0.99]
PPE/TA	-0.00 [-12.69]**	-0.00 [-10.81]**	-0.00 [-11.04]**	-0.00 [-12.14]**	0.00 [2.25]*	-0.00 [-0.89]	-0.00 [-0.85]	0.00 [1.55]
DUMMYCEO	0.39 [8.37]**	-0.05 [-2.13]*	-0.18 [-10.38]**	0.57 [16.65]**	0.10 [7.66]**	-0.21 [-6.01]**	-0.20 [-5.79]**	0.30 [6.30]**
FOUNDER	0.17 [8.21]**	0.19 [4.55]**	0.22 [8.52]**	-0.03 [-0.94]	0.31 [1.93]	0.38 [7.12]**	0.22 [4.07]**	0.10 [0.70]
BSIZE	0.02 [2.17]*	0.02 [8.94]**	0.07 [31.57]**	-0.06 [-8.44]**	0.02 [1.41]	0.02 [4.29]**	0.04 [4.67]**	-0.02 [-2.20]*
Observations:	591	591	591	591	591	591	591	591
R-squared:	0.37	0.40	0.54	0.39	0.84	0.81	0.85	0.84
F-statistic:	43.02	48.99	86.25	46.71	10.00	7.92	10.37	9.68

t-statistics are reported in parentheses. \*, \*\*, \*\*\* indicates coefficient significance at the 10%, 5%, and 1% level, respectively

## **10.10: Conclusion**

This chapter provides empirical evidence on the determinants of executive remuneration and analyses the impact of company performance, measured as TQ or ROA, (see Mehran 1995, 170) and ownership structure on executive remuneration. Executive remuneration measures are CEOPAY, HPD, PAYT and CEOTR. The impact of ownership structure on CEO pay is examined using CEO ownership, total director ownership and institutional ownership. The control variables are company size, debt, cash holdings, board size, founder and dummy variable for the separate roles of the CEO and the chairman.

The ordinary least squares method includes fixed-effects to allow for the unobserved heterogeneity across companies. The main findings, based on a sample of 197 AIM companies, were that company size has a dominant effect in determining the level of executive remuneration. The result for a relationship between the pay and company size is consistent with the results of previous studies (Conyon and Murphy 2000; Lee and Chen 2011; Ozkan 2011). One explanation is that larger companies need higher quality directors and need higher pay levels to attract them.

The results confirm the first hypothesis that the relationship between the executive pay level and company performance measure of TQ is positive and significant. Using an accounting measure, ROA, the results show no association between the executive pay and the ROA.

The results confirm the second hypothesis that the relationship between the level of executive pay and company size is positive and statistically significant with measures of managerial pay and robust with different measures of company size, (MKVAL).

The results confirm the third hypothesis regarding the pay distribution in top executive, that is, that the relationship between executive remuneration measured as the ratio of CEO pay to the total remuneration of the directors (CEOTR) is negatively related to TQ and moderately significant. However, as per hypothesis 1, it

is not robust to different measures of company performance. This finding contrasts that of Bebchuk *et al.* (2011) who find that using ROA is positive and significant. However, the differences may be due to the sample type, number of observations and the explanatory variables.

The results do not support the fourth hypothesis since CEOPAY has a negative coefficient (the expected direction was positive) and is statistically significant without fixed-effects. The results show that with the inclusion of fixed-effects CEO\_OWNP has a positive coefficient but no longer statistically significant. With the ownership as the governance variable, the direction of the coefficients does not change with the inclusion of different measures of performance in the regressions. The findings suggest that the inclusion of a governance variable may serve to reduce the agency problems between managers and the company. In this case, the increase in CEO\_OWNP correlates to a decrease in CEOPAY. Yet remuneration can enhance agency costs if it is not monitored (Jensen *et al.* 2004).

The fifth hypothesis cannot be confirmed, since the results show that when fixed-effects are ignored the direction of the coefficient on DIR\_OWNP is negative and statistically significant. With the inclusion of the fixed-effects, the direction of the coefficient reverses and remains statistically significant.

The results support the sixth hypothesis since CEOPAY has a negative relationship to institutional ownership when the fixed-effects are included in the regressions. According to Hartzell and Starks (2003) institutional shareholders serve a monitoring role in the principal-agent relationship and hence there is a negative relationship between the level of remuneration and the institutional shareholder ownership level. The results are not statistically significant with TQ, but statistically significant with ROA with the fixed-effects.

The findings on company performance, TQ and ROA as proxies for performance, suggest that the performance measure has an impact on CEOPAY. The implications of CEO pay are that company size matters. This final chapter provides

empirical evidence on the determinants of the executive remuneration levels for a sample of 197 AIM companies for the period 2008 to 2010. The results indicate that ownership type influence the level of CEO compensation and the findings suggest that company size matters since larger firms consistently give higher pay levels.

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## CHAPTER 11 CONCLUSIONS

### 11.1: Introduction

There is a paucity of academic studies on the potential impact that the adoption of good corporate governance practices may have on company value in smaller, growth companies that are quoted on an exchange. This study is important because it contributes to filling this gap in our knowledge. Unlike companies seeking admission to the main London Stock Exchange market, the companies admitted to the Alternative Investment Market (AIM) are not subject to the UK Listing Authority's listing rules and face lower regulation. AIM companies are not required to follow the recommendations of the UK's Corporate Governance Code (2012), although, in practice most companies adopt the minimum requirements, following the guidance provided by the Quoted Companies Alliance (QCA). The QCA recommendation contributes highly to better transparency, while at the same time reflecting the flexibility of the application of the 'comply or explain' concept. AIM constitutes a mix of companies, where the larger companies generally follow the UK's Corporate Governance Code recommendations, whereas the smaller companies barely adhere to the minimum requirements of the QCA guidelines. Researching these companies is important because there is evidence that the market rewards those companies that adopt good corporate governance practices.

### 11.2: Research Questions Answered

#### Theoretical questions:

Taking the previous literature in the field of corporate governance as a starting point, can the theoretical approach of agency theory developed mainly in the context of large companies, be extended to smaller quoted companies. In particular, do we observe in smaller companies quoted on AIM the diffused ownership structure, which is, assumed to underlie agency theory as typified in an Anglo-Saxon context?

The theoretical prediction that the presence of higher investor protection in common law countries, for example, UK, leads to greater ownership dispersion is ambiguous (Porta *et al.* 1999). Because the AIM companies typically exhibit block

holdings in their ownership and governance structure, the simplicity of agency theory, as shown in Figure 3.1, does not capture the actual structures of AIM companies. The research provides support for the wider agency model based on controlling or dominant shareholder.

### **Empirical questions:**

First, does overall corporate governance disclosure show association with higher company performance, that is, results from, or with individual attributes of corporate governance?

Prior research has used different data sources for the construction of corporate governance measure or index. These sources include surveys, questionnaires, and third party generated indices. The construction of the corporate governance index follows the themes developed by Bruno and Claessens (2007) and the guidelines provided by the Combined Code 2008 and the Quoted Companies Alliance guidelines (QCA). The results show a nomination committee exists in a minority of the AIM companies, however, the duality of the chief executive officer (CEO)/chair and the presence of audit and remuneration committees are observed as more common features among AIM companies. The results show that the corporate governance, measured using a corporate governance score based on company governance disclosures, is not associated (in terms of a statistically significant relationship) with company performance measured as TQ, ROA and MBV. The results also show that corporate governance attributes is not explained well by other company specific control variables such as size, growth, and the ratio of capital expenditure over sales. Regression of the sub-indices on the company performance, the results show that there is no association with any of the sub-indices and TQ, except the remuneration sub-index, REM1, shows a weak association with ROA.

Second, what are the determinants of ownership structure for the AIM companies? How do different ownership structures affect company performance?

Theory suggests that executive ownership helps align the interests of management with those of shareholders and that large block holders can prevent

expropriation by the management. The implication is that concentrated ownership is associated with higher company performance. To investigate this, it is first necessary to study the factors that determine ownership structures. Various measures of ownership were used, and the endogeneity problem (that ownership might be dependent on company performance) was addressed by including performance measures as explanatory variables. The results suggest that ownership is dependent on company size – companies with higher total assets and higher capital intensity, tend to have smaller block shareholdings.

Examining the relationship between ownership and company performance, the empirical results confirm that there is managerial entrenchment at higher levels of ownership. The findings of this study are consistent with the finding of Short and Keasey (1999) that managerial ownership has a non-linear relationship with performance that implies managerial alignment at lower levels of managerial ownership, managerial entrenchment at moderate levels of managerial ownership, and alignment again at higher levels of managerial ownership. However, the results vary depending on how ownership of the company is defined and measured. I do not find conclusive evidence that corporate ownership varies systematically in ways that are consistent with improved company performance.

Third, what are the determinants of Chief Executive Officer's (CEO) pay for companies on the AIM?

The results show that company performance (measured as TQ), control variables such as company size and the presence of the founder on the board of directors are positively and statistically significant to executive pay. Separation of the Chairman and CEO roles has a significant impact on executive pay, but the direction of the relationship varies depending on which measure of the executive remuneration is used. However, the results are not robust with ROA as a measure of company performance.

### **11.3: Research Limitations**

The first limitation is that this thesis focuses on the arguably narrow theoretical view that the agency problem exists between the management and the shareholders and often between the single agent, the CEO and the shareholders as the principal. Corporate governance has been discussed in the research literature using different theories (described in Chapter 3). Although, AIM companies are not dispersed compared to the large companies on the main market and hence there will be less of the traditional agency problems. However, under the more concentrated ownership, or presence of large shareholders there is likely that the expropriation problem shifts to the large shareholders. The potential clash of objectives includes that between the large shareholders and the minority shareholders. Academic authors have debated whether companies should be run solely in the interests of shareholders or whether the interests of other stakeholders, that is, any group or individual who can affect or is affected by the organisation's objectives (Freeman 1984). Therefore, the other legitimate stakeholders should also be considered. The institutional regulation, advocates the supremacy of the shareholder interest should be maintained, but faintly touches legitimately on the other stakeholders.

The second limitation is the method used in this study, which is predominantly a quantitative study of published data. Therefore, this study largely ignores any nuances specific to individual companies or the actors within the companies. Although qualitative methods such as semi-structured interviews would involve a smaller sample size compared to the quantitative method used in this thesis, they may ultimately disclose more about the effectiveness of the decision-making strategies of the key players in the companies.

The third limitation is the method for analysing the empirical data, which has mainly used the ordinary least squares regression approach (OLS). Recent developments in corporate governance research use other models besides the OLS. These include the two stage least squares (2SLS) and three stage least squares (3SLS) regression analyses, which are utilised in order to address the issues of endogeneity. The econometric analysis used both 2SLS and 3SLS in Chapters 9 and 10, but the results did not find any substantial differences in the coefficient values in

comparison with the results of the OLS. Using a larger sample and focusing on the larger companies on the AIM may lead to different results. For example, Farag *et al.* (2014, 10-12) using 271 AIM companies do find a significant relationship between corporate governance attributes and accounting performance measure, return on assets, but do not find any relationship between venture capitalist ownership and both financial performance and corporate governance.

The fourth limitation is the sample size issue particularly affected the findings in Chapter 8, as the data had to be manually collected. Hence, the results reported in Chapter 8 uses a smaller sample size compared to the other two empirical chapters, and compared to other researchers whose sample sizes are much larger. The small sample size in Chapter 8 came about due to delisting from the AIM or corporate data were missing. The results did not show any relationship between the corporate governance and company performance, and this may be due to the bias in the selection of the sample as the later chapters with larger sample size did have a relationship. In addition, the small sample size may reduce the statistical power of tests.

#### **11.4: Contributions**

From the above, this thesis draws out three broad potential contributions. The first of these is that this work contributes to the existing work on corporate governance by filling the gap between the larger main market and the second tier stock exchange, within a common law legal system (discussed in Chapter 5). The contextualised and detailed account of corporate governance in the UK and the AIM companies should be of interest to academics concerned about the potential of corporate governance research and its practical implications within second tier markets, such as AIM, as it is characterised by different regulatory requirements compared with the London Stock Exchange's main market. A feature of the AIM is the use of nominated advisers in their monitoring capacity is an important factor for the AIM companies. This should also be of interest to those who consider that corporate governance practices may be converging but are still largely dependent on the national attributes, as well as idiosyncrasies of individual companies and their

management. I have used the development of governance theories, development of the corporate governance codes in the UK and the factors that contribute to ownership concentration to help understand the gap between the main market and the AIM. The research findings highlight that the Berle and Means (1932) hypothesis of dispersed ownership may not be generalisable to the smaller quoted companies. The problems of corporate governance involving an agent remain but have now shifted to include the blockholders and the minority shareholders as the principal-agent relationship.

The second contribution in this thesis adds to the series of empirical research that have examined disclosure with best practice provisions of the corporate governance code at country level, and it adds to this knowledge by providing evidence using AIM companies and by evaluating the relationship between ownership structure and company performance.

The third contribution in this thesis adds to the body of research that looks into executive remuneration. This thesis adds to this knowledge, first, by considering the determinants of the chief executive remuneration and, second, by offering more evidence on the relationship between the executive remuneration and company performance for the AIM companies.

### **11.5: Further Work**

There are potentially four areas for future work. The AIM has been successfully in existence since 1995. As the regressions in Chapters 8, 9 and 10 show that there are missing variables, this suggests that there is need for further research to augment the explanations by investigating whether managerial attributes such as age, tenure and education can affect company performance. Therefore, future work might involve longitudinal studies of whether individual managers affect corporate behaviour and performance.

There is a large amount of literature that argues that the industry is an important determinant of governance outcomes (see Chancharat *et al.* 2012, 145). Given that a large part of AIM consists of mining and oil and gas companies, this suggests a second line for future research, which would determine the extent to which industry determines governance structures, and indirectly the performance of AIM companies.

The study of AIM, in this thesis, is a single case study of governance, ownership and performance of companies on the second tier stock exchange. New second tier markets have been appearing in other countries, and a third line of future research may involve both exploratory studies of these new markets and comparative investigations to determine the extent to which findings relating to AIM can be generalised more widely to other second tier markets.

The London Stock Exchange and the government have emphasised the soft touch regulation and use of self-regulation. The ownership and control structures in large companies have been extensively analysed by several authors such as Hart (1995). This analysis assumes that a corporation's control exists centrally via a unitary board system in the UK. However, the issues of related parties due to their influence/control may organise governance structures, which may lead to expropriation of corporation assets due to managerial power. Therefore, the policy makers may want to recommend stricter adoption of the country's corporate governance codes for the second tier exchanges, compared to the current less rigid rules and, thereby, protect the minority shareholders. Therefore, there is a need to revisit the existing work from the regulation perspective.

## **11.6: Conclusions**

This chapter began with identifying a gap in the corporate governance literature. It then answered the research questions, on the theoretical aspects as to whether agency theory can be extended to smaller quoted companies. It then answered three empirical questions relating to the following: first, whether overall corporate governance disclosure is associated with higher company performance,

that is, results from, or with individual attributes of corporate governance. Second, the determinants of ownership structure, and, third, the determinants of CEO pay. The thesis contributes to the understanding of the gap between theoretical corporate governance and corporate governance in practice, and each of the three empirical chapters document previously untold behaviour of smaller listed companies, which may contribute to corporate governance literature in general. This thesis contributes to the use of agency theory in the field of corporate governance in smaller listed companies, new regulatory recommendations requiring a shift from the current flexible adoption of corporate governance practices and the reduced regulatory requirements compared to the LSE main market. The thesis was concluded with a discussion on four potential areas for future research: additional research to include management attributes, industry influence, empirical case studies into the gap between corporate governance practices within the main market and the second tier market in different countries, and, finally, revisit the existing work from the regulation perspective.

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## APPENDIX

### APPENDIX 1: List of official AIM Nominated Advisers (Nomads)

Nominated Advisers (Nomads)	Nominated Advisers (Nomads)
Allenby Capital Limited	Libertas Capital Corporate Finance Limited
Altium Capital Limited	Liberum Capital Limited
Arden Partners plc	Macquarie Capital (Europe) Limited
Beaumont Cornish Limited	Merrill Lynch International
Cairn Financial Advisers LLP	Nomura Code Securities Limited
Canaccord Genuity Hawkpoint Partners Limited	Northland Capital Partners Limited
Canaccord Genuity Limited	Nplus1 Singer Advisory LLP
Cantor Fitzgerald Europe	Numis Securities Limited
Cenkos Securities Plc	Oriel Securities Limited
Charles Stanley Securities	Panmure Gordon (UK) Limited
Citigroup Global Markets Limited	Peel Hunt LLP
Credit Suisse Securities (Europe) Limited	PricewaterhouseCoopers LLP
Daniel Stewart & Company plc	RBC Europe Limited
Davy Corporate Finance	RFC Ambrian Group trading as RFC Ambrian
Deloitte Corporate Finance	Sanlam Securities UK Limited
Deutsche Bank AG	Seymour Pierce Limited (in administration)
Execution Noble & Company Ltd	Shore Capital & Corporate Limited
FinnCap Ltd	Smith & Williamson Corporate Finance Limited
Fox-Davies Capital Ltd	SP Angel Corporate Finance LLP
Goldman Sachs International	SPARK Advisory Partners Limited
Grant Thornton UK LLP	Strand Hanson Limited
HSBC Bank plc	UBS Limited
Investec Bank Plc	W.H. Ireland Limited
J. P. Morgan Securities Plc	Westhouse Securities Limited
Jefferies International Limited	ZAI Corporate Finance Limited
	Zeus Capital Limited

Source: London Stock Exchange

**APPENDIX 2: List of 56 companies used in Chapter 8**

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<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>
ACM Shipping Group	ADL	Advanced Medical Solution
Albermarle & Bond	Alkane Energy	Alternative Networks
Antrim Energy Inc	Belgravium Technologies	Capital Pub Co
Catalytic Solutions Inc	CBG Group	China Biodiesel Intl Hldg Co Ltd
CSS Stellar Plc	Dart Group Plc	Dawnay Day Treveria
Energiser Investments Plc	Fieldbury Plc	Finders Resources
Finsbury Food Group Plc	Fulcrum Pharma	GW Pharmaceuticals
Imagelinx Plc	Intercede Group	Lancashire Hldgs
Latham(James)	Leyshon Resources	LPA Group
Majestic Wines Plc	Motivcom	Newmark Security
Personal Group Hldgs	Pittards	Plexus Hldgs
RAB Capital	Real Estate Investors	RWS Hldgs
Sefton Resources Inc	Simigon Ltd	Slimma
Sopheon	Sovereign Reversions	Strategic Thought Group
Synchronica Plc	Tanzanite One	Thirdforce
Tottenham Hotspur Plc	Touch Group	Trading Emissions
West China Cement Ltd	Wynnstay Group	Xploite Plc
YM Biosciences Inc	Young & Co's Brewery	Zenergy Power Plc
Zoo Digital Group Plc	Zytronic	

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Source: London Stock Exchange

**APPENDIX 3: List of 131 companies used in Chapter 9**

<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>
2 Ergo Group	Abbey Plc	Abcam	Accsys Technologies
ACM Shipping Group Plc	Advanced Medical Solutions Group	Akers Biosciences Inc	All Leisure Group Plc
Alternative Networks	Amiad Filtration Systems	Amino Technologies	Andor Technology
Asian Citrus Hldgs	ASOS plc	Augean	Avanti Communications Group Plc
Avocet Mining - Replaced European Goldfields Caretech Hldgs Plc	Billing Services Group	Blinkx Plc	Cape Plc
	Ceres Power Hldgs	Character Group	China Shoto
Churchill China	Cohort	Colefax Group	Colliers Cre
Concurrent Technologies	CPL Resources	Cropper(James)	Cryo-Save Group Nv
CVS Group Plc	Dart Group Plc	Datatec	Desire Petroleum
Discovery Metals Ltd	DM Plc	Education Development Intl	Eros International
Firestone Diamonds	First Property Group	Forte Energy NI	Fyffes
Goals Soccer Centres	Green Dragon Gas Ltd	Group NBT	GTL Resources
Gulf Keystone Petroleum	Gw Pharmaceuticals	Hamworthy Plc	Hargreaves Services
Healthcare Locums Plc	Helius Energy Plc	Highland Gold Mining	Hotel Corp(The)
Hutchison China Meditech	Huveaux Plc (Dods)	Ideal Shopping Direct	Immunodiagnostic Systems Hldgs
Immupharma	International Greetings	Iomart Group	IQE Plc
James Halstead	Kalahari Minerals	Kbc Advanced Technologies	Latham(James)
Lidco Group	Lombard Medical Technologies	M&C Saatchi	M.P.Evans Group

<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>
Majestic Wine Plc	Maple Energy Plc	May Gurney Integrated Services	Medusa Mining Ld
Modern Water Plc	Monitise Plc	Mulberry Group	N.W.F Group
Nature Group Plc	Netplay TV Plc	Nichols	Origin Enterprises Plc
Oxford Advanced Surfaces Gr Plc	Park Plaza Hotels Ltd	Peel Hotels	Petra Diamonds
Phorm Inc	Pittards	Plant Health Care	Platinum Australia Ltd
Playtech Ltd	Plexus Hldgs	Portmeirion Group	Powerflute OYJ
Prezzo	Provexis	Proximagen Neuroscience	Rcg Hldgs Ltd
Rotala	Rurelec	Scapa Group Plc	Silverdell Plc
Sinclair(William)Hldgs	Skywest Airlines Ltd	Snacktime Plc	Software Radio Technology
Sqs Software Quality Systems Ag	Sterling Energy	Straight Plc	Sutton Harbour Hldgs
Swallowfield	Tanfield Group	Telford Homes	The Stanley Gibbons Group Plc
Thorpe(F.W.)	Toluna	Total Produce Plc	Tottenham Hotspur Plc
Toumaz Hldgs Ld	Vertu Motors Plc	Vinaland	Walker Greenbank
Wynnstay Group	Youngov	Young & Co's Brewery	Zenergy Power Plc
Zetar Plc	Velosi Ltd (available for 2008 and 2009)	System C Healthcare (available for 2008 and 2009)	

Source: London Stock Exchange

#### APPENDIX 4: List of 197 companies used in Chapter 10

Company Name	Company Name	Company Name	Company Name
21st Century Technology plc.	Abcam Plc	ACM Shipping Group plc	Acta SpA
Active Risk Group PLC	Advanced Medical Solutions Group plc	Advanced Power Components plc	ADVFN plc
Agriterra Limited	Akers Biosciences Inc.	Alliance Pharma plc	Allocate Software plc.
Alternative Networks Plc	Altitude Group plc	Amino Technologies plc	Amphion Innovations plc
Andor Technology plc	ANGLE Plc	Anglo Asian Mining PLC	ANT Plc.
AorTech International plc	Arden Partners Plc.	Arian Silver Corporation	Armour Group plc
Artisan UK plc	ASBISc Enterprises Plc	Asia Digital Holdings plc	Asian Citrus Holdings Ltd
ATH Resources plc	Augean plc	Avesco Group plc	Biome Technologies plc
Bond International Software plc	Brady plc	Byotrol plc	Camco International Limited
CareCapital Group Plc	Caretech Holdings PLC	Cello Group Plc	Celtic plc
Chamberlin plc	China Shoto Plc	City of London Investment Group PLC	Clover Corp. Ltd.
Coolabi PLC	CPL Resources plc	Crimson Tide Plc	Dart Group plc
Datatec Ltd.	DCD Media plc	Deltex Medical Group plc	Desire Petroleum plc
Driver Group, PLC	Ebiquity plc	Eckoh Plc	Education Development International plc
EnCore Oil Plc	e-pay Asia Limited	eServGlobal Ltd.	Eurogold Ltd.
Falkland Islands Holdings plc	Faroe Petroleum plc	Fiske Plc.	Forte Energy NL
Fyffes plc	GB Group plc	GCM Resources Plc	Gippsland Ltd.
Global Energy Development plc	Goals Soccer Centres plc	Gooch & Housego plc	Group NBT plc
Gulf Keystone Petroleum Ltd.	GW Pharmaceuticals plc	Hargreaves Services Plc	Hasgrove PLC
Havelock Europa plc	Hutchison China MediTech Ltd.	Hydro International plc	Hydrogen Group PLC
Ideal Shopping Direct Plc	IDOX plc	ILX Group plc	Imagelinx plc
Immedia Group PLC	Imperial Innovations	InterBulk Group plc	Intercede Group plc

<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>
Interior Services Group plc	Iomart Group plc	IS Solutions plc	Jacques Vert plc
James Cropper plc	Jelf Group	Just Car Clinics Group Plc	KBC Advanced Technologies plc
LiDCO Group plc	Lighthouse Group plc	Livermore Investments Group	Lok'n Store Group plc
LPA Group plc	M&C Saatchi plc	Manganese Bronze Holdings plc	Mariana Resources Ltd.
Matchtech Group plc	Mattioli Woods plc	Mediwatch plc	Metalrax Group plc
Metrodome Group plc	Mid-States plc	Morson Group plc	MTI Wireless Edge Ltd.
Murgitroyd Group plc	Mwana Africa PLC	Nationwide Accident Repair Services plc	NetPlay TV plc
Next Fifteen Communications Group plc	Nichols plc	Norman Broadbent Plc	Northbridge Industrial Services PLC
Numis Corporation plc	OMG plc	OOH Media Group Ltd.	Patsystems plc
Peel Hotels plc	Penna Consulting plc	Pennant International Group plc	Petra Diamonds Ltd.
PetroLatina Energy Plc	Pilat Media Global plc	PipeHawk plc	Plant Health Care
Playtech Limited	PLUS Markets Group plc	Portmeirion Group plc	Prezzo plc
Printing.com plc	Provexis plc	Proximagen Group plc	Rambler Metals & Mining PLC
Razor Risk Technologies Limited.	Red24 plc	Regal Petroleum plc	Regency Mines Plc
Regeneris plc	Renew Holdings Plc	Rockhopper Exploration plc	Rotala PLC
RTC Group plc	Sarantel Group PLC	Scapa Group plc	SciSys plc
Serabi Mining Plc	ServicePower Technologies plc	SimiGon Ltd.	Software Radio Technology plc
Solid State plc	Sound Oil Plc	ST Barbara Ltd.	Staffline Group plc
StatPro Group plc	Sterling Energy plc	Straight plc	Summit Corporation plc
Surgical Innovations Group plc	Sutton Harbour Holdings plc	Swallowfield plc	Sylvania Resources Ltd.
Symphony Environmental Technologies Plc	Synairgen	Synchronica PLC	Taihua Plc
Tanfield Group plc	Tangent Communications PLC	Telford Homes plc	Telit Communications PLC

<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>	<b>Company Name</b>
The 600 Group PLC	The Stanley Gibbons Group plc	Tikit Group plc	Timeweave plc
Tricorn Group plc	Tristel Plc	UBC Media Group plc	Ukrproduct Group Ltd.
Ultrasis plc	United Carpets Group PLC	Universe Group plc	Volvere plc
Walcom Group Ltd	Walker Greenbank plc	Webis Holdings Plc	Workplace Systems International plc
Young & Co's Brewery plc	Zenergy Power PLC	Zetar Plc	Zoo Digital Group plc
Zytronic plc			

Source: London Stock Exchange