

# **Corporate Governance, Disclosure and the Role of Nomads: Evidence from the Alternative Investments Market**

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## ABSTRACT

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This thesis examines the different areas of agency theory including managerial discretion, corporate governance compliance, voluntary disclosure policies and regulation. The institutional setting for these studies will be the Alternative Investments Market (AIM) as this market provides a unique regulatory environment and distinctive corporate governance features that makes it suitable for analysis. Specifically, AIM, unlike its FCA-regulated main market counterpart, operates under a self-regulated environment, where application of the FCA rules and combined codes are voluntary. This allows great discretion in a firms operation leading to potential agency problems as mandatory disclosure is limited to price-sensitive information, allowing for the presence of information asymmetry. As well as agency theory, one of the main arcs of this thesis explores the role of Nomads. As principle regulator, these firms are charged with ensuring the compliance of their clients with the AIM rules, as well as ensuring the continued success of AIM itself.

The first investigation creates a Nomad reputation index to test how the market responds when companies change to more reputable Nomads. To do this, event study methodology is utilised to examine the abnormal returns earned around Nomads switches. The key findings indicate that when managers switch-up to a more reputable Nomad, a proxy for managerial bonding, the market responds favourably, in spite of the costs associated with hiring a more reputable Nomad. Similarly, when managers make the unnecessary decision to switch to a Nomad of equal rank, the market responds negatively. As there is no intuitive advantage to switching to a Nomad of equal rank, it might therefore be seen as a costly and unnecessary move that will not

improve the value of the firm. Therefore, the market reacts negatively, indicating the presence of market discipline as investors are punishing managers for making a decision perceived as unnecessary. The final analysis introduces the concept of ‘strict’ Nomads who are perceived to follow the AIM rules more closely than other Nomads. The reporting lag is used as a proxy and finds a positive relation with switches to a strict Nomad over a lenient one.

The second study examines the determinant of corporate governance compliance with a focus on the effect of regulation. The findings document that regulation has not influenced the level of compliance, but rather there has been a convergence in governance standards over time given the increased awareness and demand for governance attributes. The findings also extend the Nomad reputation analysis with regards to governance and find a significant positive relation indicating Nomads influence governance standards as part of their monitoring role.

The final study examines how the extent of voluntary disclosure is influenced by the company’s corporate governance attributes and the reputation of the Nomad. This study finds a positive relation between the level of voluntary disclosure, board independence and the presence of a nomination committee. Furthermore, this study reveals that voluntary earnings disclosure is a signal for bad news as the LS regression documents a negative relation between abnormal returns and the level of voluntary disclosure. This is corroborated in the event study where the announcement of a notification of results and the subsequent earnings announcement are associated with negative abnormal returns being earned.

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## List of Abbreviations

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AIM	Alternative Investments Market
CSR	Corporate Social Responsibility
FRC	Financial Reporting Council
FCA	Financial Conduct Authority
IFRS	International Financial Reporting Standards
QCA	Quoted Companies Alliance
LSE	London Stock Exchange
Nomad	Nominated Advisor
NomadBro	Nominated Advisor and Broker
SOX	Sarbanes-Oxley
SME	Small and Medium Sized Entities
MV	Market Value
ROA	Return on Assets
ROE	Return on Equity
BMAT	Basic Materials
CNSMG	Consumer Goods
CNSMG	Consumer Services
HLTHC	Healthcare
INDUS	Industry
OILGS	Oil and Gas
UTILS	Utilities

### **1.1 Motivation**

In this thesis I will examine different areas of agency theory including managerial discretion, corporate governance, voluntary disclosure policies and regulation. The Alternative Investments Market (AIM) is used as the institutional setting for analysis, as the self-regulatory environment that AIM operates under provides a unique opportunity to discover how managers react and is influenced by its shareholders; in the absence of formal regulation. Another unique feature of AIM is that they are required to retain a Nomad (Nominated Adviser), who acts as the company's sole adviser and regulator. To date, very little has been done to examine the importance of the Nomads role in providing this supervisory service. This thesis, in all three studies, aims to fill this gap and provide evidence that Nomads, like the Big-4 auditors, are ranked according to their reputations and that a Nomads influence and reputation plays an important governance function. Chapter three will examine AIM and its suitability in greater depth.

### **1.2 Managerial Discretion**

The first study examines the market reaction to managers who use their managerial discretion to make changes to the company that are potentially costly and unnecessary. Jensen (1986) states that when managers have excess free cash flows at their disposal they make unnecessary decisions, leading to overinvestment. The first project uses this concept to hypothesise that since AIM managers are largely self-regulated, they

have a large discretion regarding the investment decisions they make. This is because the governance requirements are voluntary and there is a low regulatory burden of disclosure means they don't have to communicate their investment strategies in the same way, this can lead to managers making decision, such as Nomad switches, that investors may not deem necessary/appropriate. The first study will analyse the market reaction to such decisions and examine whether the market disciplines managers when the managerial discretion is deemed unnecessary. It would be expected that when management makes a perceived unnecessary or costly change to the company, the market would react negatively and vice versa.

In order to examine these managerial decisions, the first study uses the decision to switch a company's Nomad, as their role as principal regulator is integral to the success of companies they represent and the AIM itself. However, there is no requirement to disclose the reason a manager might make such a switch. Therefore, analysis of the market reaction is the only way to garner whether this decision is seen as valuable or alternatively, regarded by investors as a costly mistake. Furthermore, it may also be plausible that managers might make such a decision to switch Nomads to signal information about company quality to their investors. For example, Firth and Liau-Tan (1998) states that signalling through higher-quality auditor engagements is a signal of good quality IPO to entrepreneurs.

In addition to signalling theory, a hypothesis will also be formed around bonding theory. Jensen's (1986) free cash flow problem leads to an overinvestment agency problem that can be mitigated with managerial bonding. As mentioned in section 2.3.1, this is where a manager expends a company's resources to provide guarantees

that they will not invest in wealth-destroying projects. These guarantees include offering higher dividends (Jensen and Smith, 2000; Officer, 2011). A Nomad switch might also be considered a bonding cost as if a switch is made to a more reputable and costly Nomad, a manager is lowering their free cash flows available for overinvestment as well as submitting themselves to better quality monitoring and regulation from a stricter/more reputable Nomad.

The above theory indicates that a Nomad change will result in price effects. If a manager makes an unnecessary (lateral) switch, shareholders may perceive this as managers using their discretion by making a costly switch, and using up cash unnecessarily. This will ultimately have a negative on the company's market value and may lead shareholders to discipline managers by selling their shares, further devaluing the market value. Additionally, a downward switch might signal to investors that there is a cash-flow problem in the company and that management has chosen to switch to a cheaper Nomad and one that may not necessarily provide the same quality of oversight. This may induce a negative market reaction as shareholders perceive this downward as bad news about the company's future prospects. Conversely, a switch to a more reputable Nomad should be seen as a positive signal as managers are using up free cash flow to provide the company with better quality oversight and monitoring. Although, this may be a costly decision in terms of cash flow, a positive reaction in the market will increase the market value of the company.

## **Contribution**

This first study makes the following contribution to the literature. The unique Nomad Reputation index is the first inclusive index of its kind to be generated. Espenlaub et al (2012) uses five factors to measure Nomad reputation, three of which specifically refer to the AIM companies at the time of IPO. This present study uses seven factors in an index including: Client Market Value, Nomad Credit Score, and Number of clients per Nomad, with only the Nomad credit score being taken from the Espenlaub et al (2012) study. The analysis also empirically supports the use of these seven measures and has supported the index of the top-15 Nomads that can be used and replicated for future analysis.

The results supports bonding theory alluded to before as a switch to a better quality and more costly Nomad will be well received by investors as managers are subjecting themselves to greater monitoring and by hiring a more expensive Nomad which reduces the likelihood of overinvestment. In addition, the findings also provide support for signalling theory as a switch-up to a more reputable Nomad is met with significant positive company performance, providing evidence that a switch-up indicates a signalling effect regarding company quality to investors. Finally, the first study has explored the importance of the role of Nomads by finding evidence supporting the Nomad reputation index and the theoretical reasoning behind the decision to switch to certain types of Nomad.

### **1.3 Corporate Governance Compliance**

The second study establishes the quality of corporate governance structures within a self-regulated environment and whether the governance quality has improved since the adoption of new regulatory standards that increase the transparency and visibility of

the listed companies. Lardon (2012) find that European companies listed on unregulated markets only disclose information to investors when in the company's best interests. This second study provides evidence regarding the effect and success of increasing regulation by observing whether corporate governance has improved or whether companies choose to incorporate good corporate governance standards from the inception in order to remain comparable with their Main Market competitors. Prior evidence by Parsa and Kouhy (2008) relating to the disclosure of CSR on AIM has found that companies act in much the same way as companies listed on primary markets in order to be considered reputable by investors.

As well as extending the theory on the effect of regulation, the study also examines how markets react in the absence of regulation. AIM has a very limited disclosure requirement with only disclosure of price sensitive information and the annual/interim report being compulsory. Given this, there is a considerable information asymmetry problem as managers are able to hold information about the company to which investors are not privy. This in turn leads to the availability of a degree of managerial discretion as managers may choose the extent and quality of the disclosures they make to investors. Therefore, increasing regulation may reduce this managerial discretion and encourage managers to disclose more information to investors.

This study will use AIM rule 26 to examine the effects of regulation. This rule required all companies to have an up-to-date website containing information about directors, auditors, and other governing boards as well as the companies' admission document. This rule, therefore, requires all managers to make disclosures about the level of corporate governance within their company. Although this rule requires disclosure

about a company's corporate governance, it does not indicate the level/quality of governance that must be employed. Therefore, analysis will show whether regulation to make corporate governance more visible to investors has the effect of actually improving the quality of corporate governance given the potential backlash from investors if the company is found to be unsatisfactory.

It is also possible to consider this type of regulation as a bonding cost given that an up-to-date website increases the visibility of the company and allows for more accessible monitoring by investors and other stakeholders (Grullon et al, 2004). Furthermore, a manager might take this corporate governance disclosure requirement as an opportunity to signal company quality to investors. For example, a manager may employ a comprehensive corporate governance system following AIM Rule 26 and make detailed disclosures of this system on their website which will not only reduce information asymmetry but signal company quality to investors.

## **Contribution**

This will be the first study to analyse the quality corporate governance structures and the effect of regulation in a self-regulated market setting. Inchausti (1997) reports that regulation promotes disclosure and reduces the agency problem. However, given that AIM has very limited disclosure requirements, any disclosure effect of regulation should be more profound. By using AIM, there is also the opportunity to discover how markets behave in relation to corporate governance by analysing companies before and after the regulation is adopted to see whether there is a significant change. In addition, Piotroski and Srinivasan (2008) find that since the introduction of SOX, US listings

behave as an appropriate bonding method given the stronger emphasis on regulation and corporate governance. This study therefore uses this concept to examine what happens in the context of UK companies as well as self-regulated companies, and assesses the potential for regulation to act as a bonding cost. The findings report that regulation has not affected the quality of governance on AIM. Rather, there has been a convergence over time with regards to compliance. This could be attributed to the propagation of the study of governance as well as the recent economic crisis, making shareholder and manager more aware of the importance of governance structure in protecting shareholder interests and reducing agency costs.

#### **1.4 Corporate Governance and Voluntary Disclosure Policies**

Finally, I examine whether voluntary disclosures such as earnings pre-announcements and trading updates are affected by the company's level of corporate governance. This is achieved by using the results from the second study to form the basis of the level of a company's corporate governance. The voluntary disclosures are all pre-announcement disclosures before the release of a company's final and interim results. I explore whether there is a connection between the quality of corporate governance structures, at company level, and the extent of voluntary disclosures that are not covered by the markets existing regulation.

Karamanou and Vafeas (2005) report that companies who incorporate better and more comprehensive corporate governance mechanisms make better quality disclosures. Furthermore, Ntim et al (2012b) also find that companies with better quality corporate governance were associated with better quality voluntary disclosures. Given these findings, an increase in voluntary disclosure will also serve to reduce information

asymmetry as management will increase the amount of information available to investors and reduce uncertainty and risk (Krishnaswami and Subramaniam, 1999). Ajinkya et al (2005) and Klein (2002) report that better quality corporate governance increases the rate of information disclosure and decreases information asymmetry. Therefore, this study will also examine whether the quality of a company's corporate governance structure is directly related to the levels of information asymmetry.

Another dimension to examine in this study concerns voluntary disclosures as a form of signalling. Managers might take the opportunity to issue voluntary disclosures to signal information to their investors. In the case of earnings announcements, Soffer et al (2000) state that companies which are about to issue bad news in their formal quarterly financial results will pre-announce earnings prior to the official announcement to reduce earnings surprises. Similarly, Skinner (1997) contend that companies will voluntarily disclose bad news before the official results date to avoid litigation from investors. This evidence suggests that as well as signalling information about positive company quality, managers might also signal to investors about impending bad news to avoid litigation and adverse returns earned on the announcement of poor financial results. Furthermore, when investors have more information about their company, information asymmetries are reduced (Morris, 1987). Therefore, there is an opportunity to discover whether managers adopt such signalling strategies and whether making voluntary disclosures decrease information asymmetry observed on the AIM.

## **Contribution**

This final study takes agency theory literature such as corporate governance and information asymmetry theory and applies it to the AIM. This is the first study to analyse the levels of information asymmetries on AIM, which are potentially very large given the markets limited regulation with regards to disclosure. Given the possibility of large information asymmetries, this study is well placed to see how these asymmetries are affected by a company's level of disclosure as well as the quality of their internal corporate governance structures. This study will also contribute by providing results from the post-financial crisis period. It will show how the level of voluntary disclosure has changed over this time.

## **1.5 Organisation of the Study**

*Chapter 2* provides a detailed literature review regarding agency theory. The main focus of this chapter is to provide the theoretical background and support for all three studies. As well as agency theory, extent literature pertaining to associated theories such as corporate governance, information asymmetries and managerial discretion will also be provided.

*Chapter 3* provides a detailed background into the institutional setting of all three projects. This thesis uses the Alternative Investments Market (AIM) data as a basis for analysis and this chapter will concentrate on the background of this market as well as a summary of prior literature.

*Chapter 4* is concerned with the first area of study. Using auditor literature as a basis, a comprehensive Nomad reputational index is created. Using this index, the theories of market discipline and bonding are examined by analysing the market reaction when companies make certain Nomad switches to either a 'lenient' or 'strict' Nomad.

*Chapter 5* covers the second area of research. The study incorporates the corporate governance literature to analyse how SMEs comply with governance standards with specific focus on the effects of regulation. This study also develops the theories into the role of Nomads by examining how compliance is associated with the reputation of the company's Nomad.

*Chapter 6* is concerned with the third and final area of research. This study encompasses information asymmetry theories provided in the second chapter to statistically analyse how corporate governance is related to the level of voluntary disclosure. This study uses earnings pre-announcements to test which corporate governance, if any, best relate to the level of disclosure. In addition, an event study is performed to see how the market reacts to certain pre-announcements which will determine whether managers disclose information to reduce information asymmetries or to signal information to investors as a means of reducing earnings surprises.

*Chapter 7* is the final chapter and provides a summary of the areas of research examined over the course of this study.

### **2.1 Introduction**

This thesis uses the AIM market to develop the role of Nomads; explore the determinants of corporate governance quality; and the extent of voluntary disclosures made by companies with limited disclosure requirements. The present chapter provides a review of the literature on corporate governance, and agency theory, along with associated topics such as: information asymmetry, managerial discretion and market discipline. As well as establishing the theoretical background for the study, gaps in the literature are identified to motivate the hypotheses underpinning the empirical work. The three studies in this thesis will then draw down from this literature to build on the theory in relation to the proposed examination and develop the hypotheses to be tested.

### **2.2 Agency Theory**

Agency theory describes the relationship between two parties such as the owners of the company and the managers hired to run the company on the owner's behalf. However, complications arise from this separation of ownership and control and this is known as the agency problem (Jensen and Meckling, 1976; Fama, 1980; Shleifer and Vishny, 1997; Jensen, 2005). Shareholders (principals) delegate the responsibility of the operational running of their company to its managers (agents) who carry out this function, ideally in a manner that produces and maintains shareholder wealth. However, agency problems occur when the incentives of owners and managers are not

aligned, causing agents to make decisions the principal considers detrimental to their wealth (Eisenhardt, 1989; Healy and Palepu, 2001). Agency theory addresses the main agency problems. The first concerns opposing attitudes to risk. For instance, a manager might use a company's resources to invest in projects that shareholders deem too risky, causing conflicts of interest between the two groups. The same may be said for the reverse situation. A manager might avoid taking risky projects and therefore not allow shareholders the opportunity to earn additional returns and income.

Another well-cited agency problem is known as managerial empire building. This is where a manager tries to expand the company they manage beyond its optimal level. This usually occurs to aid the manager's own self-benefitting objectives such as, to increase their salary compensation, reputation and status within the company (Jensen, 1986; Masulis et al, 2007; Chan et al, 2012). This utility maximizing is achieved by excessive growth where managers try to rapidly expand the size of the company (commonly by extensive hiring of staff) in order to communicate their ability to shareholders and increase the assets under their control (Marris, 1964; Stulz, 1990). The other method is over-investment, where managers increase operations such as foreign investments beyond the optimum level to preserve their private interests (Marris 1964; Williamson 1975; Jensen 1986). Either method is not considered to be in the best interests of shareholders as both methods only serve to decrease operating performance and company value (Jensen, 1986; Hope and Thomas, 2008). Given that managers are assigned the power to control how that company develops; monitoring, regulation, governance and internal controls need to be in place to make sure the requirements of the company's shareholders are still accomplished. AIM's limited formal regulation, voluntary application of the UK Corporate Governance Code, and

low level disclosure requirements gives rise to the potential of the agency problem which will be examined throughout this thesis.

### **2.3 Agency Costs**

The study by Jensen and Meckling (1976) encompasses the theories of property rights, property, agency and finance to create a theory behind the ownership structure of companies. The paper also expands the definition of agency theory by explaining that when a principal-agent relationship exists, divergences or conflicts of interests will arise when both parties are utility maximisers. These divergences of interests can lead to the agent making decisions that are not in the best interests of the principal. In order to keep the agent-principal relationship aligned, Jensen and Meckling (1976) propose that monitoring and bonding be carried out to limit the actions of the management and provide guarantees that certain actions will not be taken. In addition, they state that where a loss has been incurred as a result of management's divergence, this loss is defined a residual loss. The combined costs of monitoring, bonding and the residual losses incurred are called agency costs. That is, costs directly associated with the agency conflict between owners and managers.

As mentioned above, corporate finance literature details two techniques that are considered to reduce the agency conflict and, in turn, agency costs. These techniques include internal and external controls. External methods include regulation and the monitoring role undertaken by the capital market, investors and analysts (Depken et al, 2006). With regards to AIM, steps taken to reduce agency costs are limited. However, Nomads provide a supervisory function that confirms to the LSE and shareholders that the company they represent are fully compliant with the AIM Rules.

However, internal controls used to limit agency costs may still be inconsistent as corporate governance adoption is voluntary. Therefore, this thesis will explore corporate governance compliance and the importance of the role of Nomads in following adopting governance mechanisms, to determine whether AIM companies take steps to reduce the agency problem by adopting comprehensive governance structures. The external mechanisms will be considered later on in the chapter.

### **2.3.1 Bonding Costs**

Another technique used to alleviate agency costs is known as bonding mechanisms, which also incur bonding costs (Jensen and Meckling, 1976 and Hart, 1995). These are the methods to reduce agency costs and are costs that are sustained and decided on by the management. Bonding strategies include: issuing dividend to relinquish control of resources by returning surpluses, and thus discretion to consume them, to shareholders (Jensen and Smith, 2000; Officer, 2011); Issuing debt to limit empire building opportunities (Mahadwartha, 2004; Hart, 1995; Easterbrook, 1984); increasing the visibility of the company to provide more external monitors to managers (Grullon, et al, 2004); cross listing in a country where the regulatory environment is greater than that of the host nation (Stulz, 1999; Coffee, 1999 & 2002; Piotroski and Srinivasan, 2008; Doidge et al, 2009).

The final example bonding is where management agrees to have the accounts audited by an outside auditor, and contracts set-up between the shareholders and management to limit the decision-making capabilities of the management. This form of bonding is particularly applicable to AIM in terms of the choice of Nomad. Fan and Wong (2005)

examine the role of external auditors as a bonding mechanism to moderate agency conflicts. Their study uses 3,119 firm-year observations from 1994-1996 for East Asian firms. Fan and Wong (2005) find that companies are more likely to engage a Big-Five auditor when there are more severe agency problems within the firm. This indicates that managers bond themselves to their firm by employing a larger, more expensive auditor, as these auditors are perceived to be more reputable. Similarly, Ho and Hutchison (2010) state that a company's internal audit is a type of bonding cost as it sends a signal to investors that the management are acting responsibly. The study analyses the characteristics of a company's internal audit and concludes that, increasing the size and scope of the internal audit serves as a bonding cost as it reduces the level to which managers can expropriate funds. The study also claims that increasing internal audit should reduce the expenditure on external audit.

Given the evidence surrounding the role of the audit as a bonding function, it might also be possible for other monitors to provide this bonding role. For example, the AIM market requires all listed companies to employ a Nomad at all times to act as monitor and primary regulator of the company. It is therefore conceivable that a manager might increase bonding costs by employing a better quality/more reputable Nomad. In doing so, monitoring may be more rigorous, signalling to investors that managers are willing to act more conscientiously by incurring more costs that do not benefit them directly. This, in turn, should mitigate any present agency conflicts.

## **2.4 Managerial Discretion**

Section 2.2 discussed the agency problem relating to manager empire building when

there are free cash flows. This agency problem is one of the theories that form the basis of the managerial discretion hypothesis. Williamson (1963) argued that inadequate monitoring and control of the management allows considerable scope in the operational running of the company. This scope is referred to as managerial discretion. Williamson (1963) uses expansion of staff as an example of this discretion. Empire building, by increasing the size of the workforce, demonstrates the scope that management has to take self-benefitting measures that ultimately increase their own salary and reputation but damage the value of the company. Jensen (1986) argues that when managers have excess free cash flows available they have the opportunity to exercise discretion by adopting value-destroying projects leading to an overinvestment problem. However, procedures taken to improve the information asymmetry problems and the wider agency problems limit the opportunity for managerial discretion (Drobetz et al, 2010). Stulz (1990) analyses policies used by companies to mitigate the managerial discretion that arises when there is information asymmetry between the managers and shareholders. Stulz (1990) states that managerial discretion is associated with two costs: an overinvestments cost when managers invest in too many projects as a result of free cash flows, and an underinvestment cost when managers claim they cannot invest in all available positive NPV projects. The study presents two ways of dealing with these costs. Firstly, issuing debt decreases the overinvestment costs, as it requires managers to pay out funds when cash flow builds up. However, this leads to underinvestment. Secondly, an equity issue mitigates the underinvestment costs by increasing the cash flows available for investment but exacerbates the overinvestment problem. Stulz (1990) therefore highlights the need for optimal financing strategies to moderate managerial discretion by controlling the company cash flows and capital structure.

Degryse and De Jong (2006) examine the investment cash flows decision of 132 companies listed on the Amsterdam Stock Exchange between 1993 and 1998. The aim of this paper is to determine whether managers are using managerial discretion to invest free cash flows leading to overinvestment or whether information asymmetry and the costs of external finance leads to underinvestment of free cash flows. The study used Tobin's Q to separate managerial discretion firms and information asymmetry firms. Companies with a low Tobin's Q are found to suffer from the managerial discretion problem. However, the paper finds evidence that leverage and, in particular, bank debt mitigates managerial discretion. Degryse and De Jong (2006) also report that corporate governance is an important factor as managers' discretion is limited when there are adequate monitoring and internal control structures.

Another way to reduce free cash flows and limit managerial discretion is pay dividends (Easterbrook, 1984). Scordis and Pritchett (1998) state that monitoring and control mechanisms must be in place to reduce managerial discretion but this is associated with monitoring and bonding costs. Scordis and Pritchett (1998) study the bonding costs in relation to policyholder dividends paid by managers of mutual life insurers. The study uses annual dividend data from 1985-1993 for 80 US mutual life insurers and presents empirical evidence that dividends are used as a bonding cost to mitigate managerial discretion as the level of policyholder dividends can be explained by the change in free cash flows.

The managerial discretion that arises due to inadequate monitoring, as put forward by Williamson (1963), is one of the potentially large agency problems related to AIM, as

the limited regulation allows managers a great level of discretion over how it manages their company. This is further compounded by the voluntary application of corporate governance. Therefore, the first study will develop this theory and determine how the market reacts when managers use this discretion to make unnecessary and costly decisions such as Nomad changes. Additionally, analysis will determine how the market reacts when a company hires a more reputable Nomad that provides superior monitoring and scrutiny, thus mitigating a managers discretion powers. The final study will also examine managerial discretion by analysing whether better quality monitoring (reputable nomads) and internal controls increases the level of voluntary disclosure. Given that there is only a stipulation to disclose price-sensitive news, managers therefore are granted large discretion when it comes to how, and to what level, they communicate with their shareholders.

## **2.5 Information Asymmetry**

Related to the agency problem is the idea that management holds more information about the company than its shareholders, leading to information asymmetries. Information asymmetry theory assumes that managers are privy to private, firm-specific information before it is released to the market, which creates uncertainty and risk for investors (Krishnaswami and Subramaniam, 1999). However, these asymmetries only last as long as the information remains private, once it is released to the market the uncertainty decreases. The theoretical study of Holmstrom (1979) considers the potential moral hazard that arises when both principals and agents engage in risk-sharing projects. Holmstrom (1979) stated that the lack of information available to investors could also initiate the agency problem as keeping or delaying

information from investors creates information asymmetries that, in turn, create conflict of interests between managers and shareholders. Companies that provide additional information by increasing disclosures and making timely announcements to shareholders will reduce any conflict that information asymmetry has caused. Armstrong et al (2010) states that agency problems are exacerbated when one party to a contract holds superior information over the other parties to the contract. Attempts to reduce information asymmetries benefit both manager and investor as investors demand a premium for handling the information risk, which increases the cost of capital for management (Barry and Brown, 1984 & 1985; Merton, 1987). Kanagaretnam et al (2007) examines whether better corporate governance reduces information asymmetries around quarterly earnings announcements. The study examines a sample of 2,027 firm day announcements of American companies and uses bid-ask spreads around the announcement of quarterly earnings as a proxy for information asymmetry. Eight corporate governance variables are developed to ascertain the relationship between the quality of corporate governance and information asymmetry. The study finds significant evidence that higher levels of corporate governance are associated with lower information asymmetries between the companies and investors. This is consistent with Ajinkya et al (2005) and Klein (2002) who find that companies with a more effective board enhance the quality and rate of information released. This, in turn, indicates that information asymmetries will be lower. Therefore, the above evidence suggests that poor corporate governance leads to lower levels of disclosure and, in turn, large information asymmetries. Similarly, Klapper and Love (2004) who study corporate governance across 14 emerging markets, find that the level of corporate governance mechanisms in place at company level is associated with lower information asymmetry.

As previously mentioned, the AIM Rules only require the disclosure of price-sensitive news. Coupled with the voluntary nature of Corporate Governance adoption, there is potential and opportunities for managers to exploit this regulatory gap and create information asymmetries through inferior communication with shareholders. Extant literature has shown that a key way of mitigating such asymmetries is through Corporate Governance mechanisms. The third study in this thesis examines whether there is a relation between better quality governance and the level of information asymmetries.

## **2.6 Signalling**

Signalling theory underpins the concept that managers take steps to indirectly convey information to investors through strategies such as dividends, financial disclosures and stock repurchases. In doing so, investors have more information about the welfare of the company so information asymmetries are reduced (Morris, 1987). Mishra et al (1998) state that signalling is only a useful mechanism when there are information asymmetries as investors are able to accurately determine a company's quality if they have access to all available information. For signalling to be effective, two conditions must be fulfilled: first, the signal must be sufficiently costly to distinguish the company from its competitors; and second, investors must be convinced that there is a positive relation between the signal and the company's underlying quality (Stigler, 1961; Stiglitz, 1985). Additionally, by voluntarily choosing to make costly disclosures to investors, managers are submitting themselves to more scrutiny and monitoring so signalling strategies may also be considered a bonding cost. Gelb (2000) studies why managers make costly signals such as dividends and stock repurchases rather than

utilising cheaper signals such as the annual report and accounting disclosures. Gelb (2000) hypothesises that releasing accounting information such as detailed forecasts or performance analysis will actually be more costly as they will be supplying competitors with valuable information. To do this, the study uses 3,562 firm years from 1981-1993 for firms ranked in the annual Association for Investment Management and Research Corporate Information Committee (AIMR). Gelb (2000) finds, consistent with his hypothesis, that companies who have more competitors and operate in a market segment with low barriers to entry will use dividends and stock repurchases to signal good news to investors to avoid releasing valuable accounting information to competitors.

Another way for managers to signal the integrity of their company is with the appointments they make. For example, choosing to engage a higher quality auditor will convey company quality as well as give an indication of company value, as a better quality auditor will invariably be more expensive. Furthermore, as mentioned earlier, a better quality auditor also acts as a bonding mechanism given the increased scrutiny managers will be subject to under a more reputable auditor. Bar-Yosef and Livnat (1984) examines whether auditor selection acts as a signal to investors regarding the company's future cash flows. The findings show that when a manager is optimistic about future cash flows, they will engage a larger, more reputable auditor indicating a signalling effect about the future prospects of the firm. Firth and Tan-Liau (1998) examine auditor selection around a company's IPO using Singapore market data from 1980-1994. The study reports that signalling through higher-quality auditor appointments allows entrepreneurs to distinguish between a good quality IPO and a bad quality IPO. The results indicate that Big-eight auditors are engaged for

firms who are more risky but have a higher market value. However, the evidence for these findings is weak and the legal environment is different to that of more developed countries, with much lower levels of litigation.

More recently, Bewley et al (2008) investigated auditor switches around the time of the Andersen scandal. The study states that while some companies switched away from Andersen promptly after Enron was declared bankrupt, others remained until the courts shut down Andersen. Bewley et al (2008) examines 711 companies switching from Andersen to assess whether the companies that made early switches away from Andersen were signalling their firm's quality to investors by being efficient financial reporters. The study finds that those who made the early switches were more likely to make voluntary restatements of their financial statements when compared to the companies who delayed the dismissal of Andersen. In addition, late switchers also had more restatements than the early switchers, indicating that these companies' financial statements were lower quality than those who made an early switch.

In addition to auditor selection, other appointments can be made to reduce information asymmetries and signal company quality to investors. For instance, Wang and Lee (2012) study the market reaction to the voluntary and mandatory appointment of independent directors to the board and whether investors reacted to these two types of appointments differently. To do this, a total of 290 voluntary and mandatory appointments were collected from the Taiwan Stock Exchange between 2002-2005. The findings are consistent with the results from auditor selection literature and show that voluntary appointments generate a positive market reaction since voluntary

appointments signal company integrity. This signalling effect is also more prominent for companies suffering more severe agency problems.

Signalling theory is explored in the first study. AIM's self-regulated approach raises concerns for investors with regards to the amount and quality of information disclosed as well as how managers are monitored: internally and externally. This gives rise to the agency problem. On the other hand, it is also difficult for managers to convey their quality given the lack of oversight of them. However, by choosing to switch Nomad to a more reputable one, managers may be signalling information to shareholders. This information might be regarding future cash flows, or a manager might want to convey information about their own quality, by subjecting themselves to more superior monitoring from a more reputable Nomad. This will be examined in the first study when an event study is used to assess the market reaction around Nomad switches to more and less reputable Nomads.

## **2.7 Corporate Governance: Generally Accepted Best Practice**

The general structure of a company whereby the management runs the company on behalf of the investors while the board of directors control the management, is not always efficient in practice. Management self-interest and the lack of board influence lead to the possibility of the decision-making process not being aligned with the requirements of investors, contributing to further agency problems. Corporate governance is the set of internal controls and policies that protect investors from management self-interest, mitigating the agency problem and impacting the way in which the company is controlled (Mitton, 2002; Denis and McConnell, 2003; Dey, 2008). When examining the agency problem, Chen et al (2011) find significant evidence that empire building is caused by agency problems, which is more pronounced for companies with weak corporate governance. These findings indicate that incorporating quality corporate governance mechanisms mitigates agency problems.

In the UK, the Financial Reporting Council (FRC) publishes reports on good practice of corporate governance called the UK Corporate Governance Code (Sep, 2012). The code provides companies with a framework of best practices and principles in relation to the structure of the board of directors, director remuneration and the board's communication with its shareholders. All companies with a Main Market listing are required under the Listing Rules to explain how they intend to comply with the code and justify parts of the code they have chosen not to follow. The UK Corporate Governance Code (Sep, 2012) and supporting corporate governance literature state that best practices consist of employing non-executive directors to the board, splitting

the role of the CEO and the chair and implementing remuneration and audit committees.

This section will examine the various types of corporate governance mechanisms. The second study uses these variables to establish how compliant AIM companies are with the UK Corporate Governance Code and the QCA Guidelines for Smaller Quoted Companies, given that both of these codes are voluntary. There will also be analysis of how compliance has changed following the adoption of AIM Rule 26, which increased the visibility of governance issues by requiring up-to-date information such as director profiles and the admission document. The third study uses these corporate governance mechanisms to test whether they positively influence the level of voluntary disclosures made on AIM to see how effective these internal controls are at mitigating information asymmetries. The following literature review provides the background and support for using these governance variables in the analyses mentioned above. A chapter six and seven draws down and expands on this literature review by examining its relevance to the AIM market and supporting the hypothesis that are tested.

### **2.7.1 The Role of the Board**

The role of the board of directors is to give advice and to monitor company management and set the strategic direction of the company (Mace, 1971; Demb and Neubauer, 1992). Kaplan and Minton (2006) also find that the board plays a disciplinary role as the study observes an increase of CEO dismissals made by the board in times of poor company performance. The role of the directors is therefore directly related to the corporate governance of the company as they are expected to

monitor and discipline managers who fail to consider shareholder interests. In relation to board structure, Akhtaruddin et al (2009) empirically examine the association between corporate governance and the level of voluntary disclosures made by Malaysian companies. The study uses a sample of 105 companies listed on the Bursa Malaysia at the end of 2002. OLS regression is used to determine the relation between voluntary disclosures and the various corporate governance variables. The corporate governance variables include: board size, outside directors, ownership structure, family control, and audit committee. The findings show that board size is positively related to the level of disclosure indicating that larger boards lead to greater transparency. This, in turn, could suggest that larger boards are a corporate governance mechanism given that greater disclosure reduces the agency problem between managers and owners by reducing information asymmetries. However, there are limitations to this study. Malaysia is a developing country and as such, corporate governance and disclosure regulation is still in its infancy. Therefore, the results may not be as sufficiently generalised as research undertaken on more-developed western markets. However, the findings by Akhtaruddin et al (2009) are consistent with the findings from Chen and Jaggi (2000) who examine the association between outside directors and disclosures for a sample of 87 Hong Kong-based firms. Chen and Jaggi (2000) state that there is a significant positive relation between the extent of disclosure and the number of outside directors on the board. Similarly, Birnbaum (1984) who analyses the strategic decisions made by US technology companies finds that information asymmetries can be reduced by increasing board size.

As well as board size, another aspect of board structure as a measure of a company's corporate governance is the number of non-executive directors (NEDs) on the board.

Pettigrew and McNulty (1995) find that NEDs are able to challenge strategies and decision made by the owner-managers who may not be acting in the best interests of other stakeholders. Brunninge et al (2007) also find that weaknesses in management strategies can be overcome by employing more NEDs on the board. Fiegener (2005) states that the presence of outside directors on the board is used for strategy development given that the owner-managers may not be competent to consider these aspects. This is supported by Keck (1997) and Leonard and Sensiper (1998) who find that outside directors will have a wide variety of skills and expertise allowing them to make more informed strategic decisions. Johannisson and Huse (2000) examine the role of directors and the factors that can influence the selection process of outside directors in small, family-run businesses. To do this, two methodologies were undertaken. First, a survey of 12 companies was carried out to support the idea that entrepreneurial companies avoid employing outside directors to the board. In-depth interviews are also performed with two family-run firms to extend the research into the role of directors. The results show that CEOs in family businesses do not completely avoid 'outside' directors, but they do not actively seek them either.

In a more recent study, Duchin et al (2010) examine the effectiveness of outside directors. Recent regulations such as, SOX (2002) have mandated that companies appoint a greater majority of outside directors to their board. Using a sample of companies that have had to increase the number of outside directors since the creation of these new regulations, Duchin et al (2010) are able to assess the effect outside directors have on company performance. Using a final sample of 2,897 companies between 1996 and 2005 they find that outside directors are significantly related with better performance when costs of acquiring information is low. However, this

relationship is reversed when their cost of acquiring information is high. Information costs are the costs of acquiring information about the company and is measured using analyst forecast, market-to-book ratios and intangible assets. These findings suggest there are optimal conditions associated with the number of outside directors appointed to the board. These findings are consistent with Byrd and Hickman (1992) who study the role of outside directors in conjunction with tender offer bids. Their results show that there is a nonlinear relationship between abnormal stock returns and the number of independent outside directors indicating an optimal level of outside directors.

### **2.7.2 Optimal Board Size**

The previous discussion around board structure proffers that a larger board alongside a greater proportion of outside directors reduces information asymmetries and agency problems. However, Lipton and Lorsch (1992) and Jensen (1993) find that there is an optimal board structure and propose a ‘one size fits all’ approach when configuring the number of inside and outside directors to be appointed to the board. Lipton and Lorsch (1992) argues that boards do not function appropriately as directors rarely provide an adequate critique of top-level management policies or of the company’s performance. The study finds that these failures are more profound when a board size increases. They report that the optimal size of the board should not exceed ten although seven or eight directors are preferred. Similarly, Jensen (1993) extends the theory of optimal board size by stating that large boards do not function efficiently and so should be kept small to allow appropriate monitoring of the CEO. Jensen (1993) concludes that the only inside member of the board should be the CEO to ensure that outside directors can provide sufficient monitoring of the CEO and the company.

Empirical research has also found similar findings supporting an optimal board structure. Yermack (1996) examines the theory that small boards operate most efficiently and have a greater company value. The study uses a sample of 452 companies taken from the Forbes rankings of the largest US companies to produce 3,438 observations over eight years. To assess the association between value and board size, least squares regression is used with Tobin's Q as a proxy for value. Yermack (1996) finds a negative relation between company value and board size. Additionally, there is also a fall in operating and profitability ratio when the board size increases.

Eisenberg et al (1998) consider the potential problems arising from an optimal board size when examining small companies. Previous studies reported that larger boards adversely affected firm performance but little was reported about the inefficiencies of small boards and small companies. Eisenberg et al (1998) use a sample of 879 small and medium sized Finnish companies. The study finds that the same issues surrounding monitoring and communication reported by Jensen (1993) and Lipton and Lorsch (1992) exist for small companies. The study concludes that rather than a 'one size fits all' approach, board size should vary according to company size.

More recently, Coles et al (2008) directly examines the 'one size fits all' assertion by Lipton and Lorsch (1992). This study also uses Tobin's Q to measure firm value and finds that the relation between value and size is u-shaped. That is, optimal company value is achieved when the boards are either very small or very large. The rationale for these findings is down to the firm-specific characteristics of the sample. For

instance large, diversified, or highly levered companies will benefit from a greater advisory role from the board so will incorporate a larger board with more outside directors. Equally, small companies will not benefit from engaging a large, costly board to monitor their activities hence a small board is more effective.

### **2.7.2 The Audit Committee**

The audit committee is comprised of members from the board of directors and is responsible for monitoring the integrity of the company's financial reporting as well as any disclosures made regarding company performance. According to the UK Corporate Governance Code (Sep 2012), the audit committee should comprise at least three, or in the case of smaller companies, two independent non-executive directors and have at least one member with relevant financial knowledge. The audit committee's main responsibility is to oversee and monitor the financial reporting process, ensuring transparency by mediating between the external auditor, the internal auditors, managers and directors (Saibaba and Ansari, 2011; Puri et al, 2010). Karamanou and Vafeas (2005) assert that the presence of audit committees is associated with effective corporate governance. Kalbers and Fogarty (1993) and DeZoort (1998) also suggest that the members of the audit committee should be independent from the company and that at least one member should have accounting management expertise. Menon and Williams (1994) state that committees that meet more frequently are better able to monitor the quality of information that is communicated to stakeholders. With regards to SMEs, Kang et al (2011) studied the effectiveness of the audit committee for 288 small and medium sized companies listed on the Australian Stock Exchange. Three measures of the audit committee are used to

measure effectiveness: activity, size and independence. The findings show that all three measures are significantly associated with lower levels of earnings management.

### **2.7.3 The Remuneration Committee**

The remuneration committee is a subgroup of the main board of directors charged with the responsibility of determining the level of pay for all the company's executives and senior management (Conyon and Peck, 1998). According to the UK Corporate Governance Code (Sep 2012), the remuneration committee should include at least three, or in the case of smaller companies two, independent non-executive directors. In addition, the company chairman may also be a member, but not chair, of the committee if they were considered independent on appointment as chairman. The presence of this committee is a strong corporate governance mechanism as without it, executives would be able to award themselves inflated salaries that are not in line with shareholders' interests (Vafeas, 2003). As stated by the UK Corporate Governance Code (Sep 2012), the committee should ideally be made up of NEDs as any executives on the board will be deciding their own pay. However, UK evidence suggests that this is not the case. Main and Johnston (1993) concluded that in two fifths of cases, directors were appointed to their own remuneration committee and that the presence of a remuneration committee is associated with higher level of compensation. Similarly, Kovacevic (2009) studies remuneration committees from the Australian perspective and found recent regulation to improve transparency and disclosure led to an increase in executive pay. Evans and Evans (2002) who examines CEO compensation of Australian companies also find that the presence of more NEDs on the remuneration committee does not have a significant effect on the level of CEO

compensation. However, the study finds significant evidence of a positive association between pay of outside directors and the levels of CEO compensation.

The recent financial crisis has ignited renewed interest in director remuneration and the effectiveness of the remuneration committee. The Walker Report (2009) stated that the lack of independence on the remuneration committee contributed to the downfall of the finance sector. Bebchuk et al (2002, 2003) propose the managerial power theory, which states that the remuneration setting process is inherently flawed, as managers are able to exert their power over the board and shareholders and effectively decide their own level of compensation. Smith (2012) analyses executive pay in relation to remuneration committee independence and the managerial power hypothesis. The study uses FTSE 350 between 1996 and 2008. Despite prior research indicating the importance of independent directors, Smith (2012) finds no significant evidence of a relation between CEO pay and board independence. Conyon et al (2011) also reject the theory of managerial power within the remuneration-setting environment.

In addition to the structure of the remuneration committee, recent studies have also examined its effectiveness as a corporate governance mechanism. Liu and Taylor (2008) study the disclosure of directors' remuneration in relation to corporate governance mechanisms. Using 191 Australian listed companies between 2003 and 2004, managers' discretionary disclosures of their own remuneration are examined against corporate governance measures including: shareholder activism, company size, board composition and existence of a remuneration committee. The results reveal

that the existence of a remuneration committee has no significant effect on the level of disclosure.

#### **2.7.4 The Nomination Committee**

The final, less familiar, committee is the nomination/corporate governance committee. This committee plays a central role in overseeing matters of corporate governance for the board, including devising and recommending governance principles and policies. It is also charged with developing the quality of nominees to the board and ensuring the integrity of the nominating process (Watson, 2004). In addition, a nomination committee is required under the UK Corporate Governance Code and should contain a majority of independent non-executive directors. Given the recent focus on board composition and diversity, the role of nominating/corporate governance committee has become a more popular feature within a company's governance structure. Furthermore, Brown (2002) finds that the adoption of a nomination committee is related to greater stakeholder involvement in governance issues. Ruigrok et al (2006) studies the determinants and effects of the nomination committee. They find that the existence of the nomination committee is associated with a higher number of independent directors and foreign directors but not gender diversity. The study also states that CEOs who also serve as Chairmen (CEO duality) are less likely to favour the nomination committee as it could reduce their influence on the selection of board members and changes in company policy. Similarly, Chapple et al (2013) find that CEO duality reduces the effectiveness of the nomination committee.

### **2.8 Corporate Governance and Disclosure**

The literature regarding information asymmetries discussed in section 2.5 shows that better governance and better disclosure reduce information asymmetry and agency costs. The third study examines the relation between corporate governance and the level of voluntary disclosure. It would be expected that better governance would lead to greater disclosure and this section examines the literature supporting this connection. Corporate disclosures help to bridge the gap between managers and investors as they provide investors with additional information and protection regarding how their investment is being handled (Akhtaruddin et al, 2009). Disclosures, therefore, are central to a company's corporate governance structure (Baek et al, 2004). Karamanou and Vafeas (2005) examine the relationship between the board of directors, the audit committee and earnings forecast disclosures. The study uses a sample of 275 companies that made 1,621 forecast disclosures between 1995 and 2000. The findings indicate that having more outside directors on the board and solely outside directors on the audit committee, lead to more accurate earnings forecast. This is consistent with previous findings that companies who incorporate more corporate governance mechanisms are associated with better quality disclosures. Studies also report that better disclosure reduces cost of capital (Botosan, 1997), lowers the cost of debt (Sengupta, 1998), and improves a company's stock performance (Healy et al, 1999; Mitton, 2002).

Ntim et al (2012b) study whether post-Apartheid South African companies voluntarily comply with and disclose the country's corporate governance rules. To do this, a corporate governance disclosure index was constructed and contained 50 provisions taken from the 2002 King Report using a sample of 169 companies between 2002 and 2006. The study finds that corporate governance compliance and disclosure improved

over the sample period. Furthermore, board size, auditor size, the presence of a corporate governance committee, government ownership and institutional ownership were all found to have a positive relation with voluntary corporate governance disclosure. More recently, Ettredge et al (2011) studies how company size, corporate governance quality, and bad news effects disclosures compliance. The study uses 128 US companies from 2002 to 2007 that have been issued comments letters from the SEC staff for failing to comply with disclosure requirements. The study finds that companies that do not comply with the SEC disclosure rules have lower quality corporate governance but are not smaller than companies that comply with the disclosure requirements.

As well as the previous findings that disclosures improve a company's stock performance (Healy et al, 1999; Mitton, 2002), there is also evidence that better quality corporate governance does the same. Cheung et al (2010) construct an index of corporate governance for a sample of the largest companies listed on the Hong Kong Stock Exchange from 2002 to 2005. The findings indicate that family companies and concentrated ownership are associated with bad corporate governance. The findings also show that the quality of corporate governance is very significant in explaining future company stock returns. Good quality corporate governance and improvements in corporate governance over time is associated with both higher stock returns and with lower risk. These findings are consistent with previous findings on more developed markets such as Drobetz et al (2004) who develop a corporate governance index and analyse the performance of German companies against the level of disclosure. The study finds a positive relation between performance and corporate governance. Similarly, Beiner et al (2006) construct a corporate governance index for Swiss

companies and find that there is a positive association between corporate governance and performance.

### **2.8.1 Corporate Governance and Isomorphism**

A final theory surrounding corporate governance is isomorphism. Di Maggio and Powell (1983) introduced the idea of organisational homogeneity. They describe three types of this isomorphism. One that is particularly relevant to corporate governance compliance, examined in the second study of this thesis, is coercive isomorphism. This is where organisations are pressured by other organisations, such as regulators, but also by cultural expectations within society to behave in a certain way. This leads to a convergence in the behaviour and structure of the affected organisations. Therefore, given this, it is possible that companies may look to their competitors for ideas when deciding on the strength and level of compliance with corporate governance regulation.

Yoshikawa and Rasheed (2009) state that, in relation to corporate governance, isomorphism can be witnessed in the convergence of government practices of companies over different countries. La Porta et al (2000) also find that this convergence of corporate governance practices at an international level is being observed more frequently. Back at firm level, Useem and Zelleke (2006) examine how a company decides on the quality of their corporate governance structure. The paper reports that due to the relation between corporate governance and company performance, companies tend to look to each other for direction on best practice. This is made possible by the increasing visibility of companies by way of company websites

that detail much of a company's financial information as well as governance information such as board structures and director profiles.

UK Main Market companies are required to follow the UK Corporate Governance Code (formerly the combined code). This regulation may, unintentionally, encourage collusion amongst companies and their competitors when deciding how to apply this code. Furthermore, there will be pressure from investors/stakeholders on how the code is applied and knowledgeable investors may wish the company to follow the structure of their most established competitors. The overall influence may lead to companies within the same industry to become homogeneous, and therefore experience isomorphism. The experiences observed on AIM may be very different, where adoption of the code is voluntary. As AIM companies are generally smaller than those of their Main Market counterparts, fully adoption the standards set out in the code may be prohibitive. However, they are still subject to outside pressure and influence. Investors may not be willing to accept lower quality governance than more established competitors, so may put pressure on AIM companies to adopt comparable governance standards. Furthermore, developments in the AIM rules have also created the potential of isomorphism. AIM Rule 26 (Feb 2007) mandated that all companies keep an up-to-date website containing details including: the admission document, director profiles, constitution documents, and a description of any board committees. This rule meant that, for the first time, the governance of AIM companies was going to be visible to all shareholders and potential investors. Such a development may encourage managers to upgrade/adopt better quality governance given their structures could now be easily be compared to Main Market competitors and even other AIM competitors. The theory of isomorphism is explored in the second study where an examination of

compliance is analysed before and after the application of AIM Rule 26, to establish whether governance has improved.

## **2.9 Law and Finance**

As previously shown, agency problems can be mitigated by implementing internal controls and principles known as corporate governance. There are also external functions that can be imposed to reduce agency problems such as the country's legal system and the associated levels of monitoring and regulation.

Prior Governance theory has shown that differences in legal systems can impact the effectiveness of corporate governance at firm level (Aguilera et al, 2008; La Porta et al. 2000). For example, "in common law nations, investors are willing to take more risks and use "arms-length" control mechanisms since they have legal remedies if board members and managers do not act in their best interest and maximise firm profitability" (Bruton et al, 2010). This is particularly relevant to this thesis these, as common law countries like the UK are more flexible than their code law counterparts. This, coupled with the self-regulatory approach to regulation makes AIM a particularly interesting market platform. As will be discovered in the next chapter, different global stock exchanges have tried to replicate AIM, with varying and limited degrees of success.

### **2.9.1 Regulation**

Regulation can be imposed directly from the government, or from various regulatory bodies such as the Financial Conduct Authority (FCA). In July 2012, the Kay Report

was published which analysed the UK equity markets and long-term decision-making. With regard to regulation, the report stated that even though there was increasing demand for more regulation in the equity markets, there was also doubt cast about the effectiveness of regulation. The report also makes clear that regulation should only be imposed if it is in the best interests of market users (investors and companies) rather than intermediaries (e.g. asset managers and brokers). The Kay Report states that regulation should only be implemented when in the best interests of both companies and investors and that any existing regulation that acts as a disincentive for market users should be reviewed.

Existing literature also supports the influence of regulation in regards to reducing information asymmetries. Inchausti (1997) finds significant evidence that regulation positively influences the level of disclosure, reducing information asymmetries. The findings support the view that regulation increases transparency and reduces information asymmetries that affect IPO valuations and is further supported by the findings by Horton et al (2013) and Hodgdon et al (2008).

### **2.9.2 The Agency Problem in the Absence of Regulation**

Given that the Kay Report (2012) states that regulation should be in the best interest of market users, it is necessary to analyse the effects of markets that have little or no regulation to see whether the companies perform in the same way or investors treat them differently. Unregulated market platforms, such as AIM, are generally attractive to SMEs and growth companies due to the limited barriers to entry and the relaxed approach to on-going regulation. Lardon et al (2012) study financial disclosures from companies listed on the Euronext Free Market. To do this, company financial disclosures were gathered from 174 companies from the French Free market (174) and the Belgium Free Market (17). The study finds that companies will disclose information when it is in their best interests. These disclosing companies tend to be younger, have higher free float and better accounting performance. Analysing AIM, Parsa and Kouhy (2008) find that AIM companies disclose information in the same way as companies on primary markets in respect to the disclosure of corporate social responsibility (CSR) reporting, in order to maintain their corporate reputation.

The findings from Parsa and Kouhy (2008) indicate that AIM companies, influenced by maintaining their reputation, act in the same way as their Main Market counterparts. AIM is largely self-regulated and is not under the jurisdiction of the Financial Conduct Authority (FCA), or required to follow the UK Corporate Governance Code, but rather, the private sector. These private sector regulators are called Nominated Advisors (Nomads) and they have an advisory role as well as being the principal regulator. Therefore, despite AIM operating in a common law country, they can circumvent traditional regulation and rely solely upon the monitoring provided by

Nomads. This further highlights the importance of the role of Nomads, particularly their perceived reputation and the quality of services they provide. Using the theory behind law and regulation, one of the main objectives of the second study is to determine how governance compliance changes following the rare intervention of the LSE by introducing AIM Rule 26. This is a unique opportunity to discover how companies respond to the application of regulation, given there are no mandatory pre-existing governance requirements. Furthermore, the regulatory role of Nomads is developed by analysing whether a better quality Nomad/regulator positively influences the level of governance compliance.

## **2.10 Market Discipline**

Although regulation acts as an external monitor of companies by curtailing behavior through principles and policies, it has been suggested that rather than relying solely on regulation, authorities place greater dependence on the market to discipline unruly companies (Peria and Schmukler, 2001). Although largely directed at the banking market, the market discipline hypothesis allows investors to become monitors and supplement whatever regulation is already in force by depressing share prices and bond prices enough to ‘discipline’ the management and change the company’s behaviour (Flannery, 2001). The theory has grown from prior evidence that has found investors are able to accurately assess a company’s true financial position (Flannery, 1998). However, Bliss and Flannery (2001) state that the market discipline hypothesis relies on the assumption that a company’s share price is an accurate signal of activities and performance of the company being monitored.

Market discipline is another resource investors can utilise to reduce the agency

problem. Market discipline is accomplished when investors selling securities result in depressed stock prices and higher cost of capital. In periods where investors perceive high levels of information asymmetry, represented in the market by high bid-ask spreads, share prices will be lower, indicating that the market has intervened with the share prices in order to discipline managers (Fang et al, 2009; Glosten and Milgrom, 1985). Furthermore, Peria and Schmulker (2001) study market discipline of banks in Argentina, Chile and Mexico and find that when banks take excessive risks, depositors withdraw their deposits and require higher interests rates. This course of action will have a direct effect on management compensation and reputation while destabilising any previous attempts management make at empire building. Market discipline is difficult in practice as investors seek punishment for poor decision-making but exceeding the optimal level of discipline will depress stock prices more than the losses made from wayward managers. However, this theory can be applied to the AIM in terms of the decision to switch a Nomad. If a manager makes a switch to a less reputable Nomad or an unnecessary switch to a Nomad of equal rank, the market might perceive this as poor-quality managers. Equally, it might be viewed as the managers signaling poor future performance, as they have to switch to a cheaper Nomad and to one that may not provide the same level of oversight as a more reputable Nomad. Such switches may lead to market discipline, where investors view these switches as bad news and decide to sell their shares, depressing the stock price.

## **2.10 Summary**

The above literature review has provided an overview of the agency problem and its related theories. More specifically, prior literature indicates that managers exercising their discretion by making unnecessary decisions, or managers not relaying information to investors in a timely way, contribute to the agency problem (Jensen and Meckling, 1976; Holmstrom, 1979). Furthermore, corporate governance, as a set of internal mechanisms such as the boards of directors, the audit and remuneration committees, are adopted by companies as a way to alleviate and mitigate any potential agency problems (Mitton, 2002; Dey, 2008). The literature review has also highlighted potential gaps in the existing literature and further areas for study. In particular, although there is extensive literature on director's remuneration, little has been undertaken on the effectiveness of the committee who decide the level of this remuneration. In addition, there is also the opportunity to examine agency theory and its associated theories in relation to unregulated markets, as limited analyses has been undertaken to discover the levels of information asymmetries and the quality of corporate governance structures in an unregulated market setting.

### 3.1 Introduction

The previous chapter reviews the relevant literature surrounding the agency problem and other related concepts that are examined throughout this thesis. In particular, the chapter highlights the potential opportunity to fill gaps in the existing literature by applying the Alternative Investments Markets (AIM) as the institutional setting for analysis. The areas of research include, but are not limited to: regulation, managerial bonding, information asymmetry and corporate governance.

As discussed in detail further on in this chapter, AIM takes a simplified and alternative approach to regulation with minimal barriers to entry and a ‘comply or explain’ approach to on-going regulation. AIM is largely self-regulated and is not under the jurisdiction of the Financial Conduct Authority (FCA) but rather, the private sector. These private sector regulators are called Nominated Advisors (Nomads) and they have an advisory role as well as being the principal regulator. Given this, it is possible to analyse how companies overcome any agency problems when there is no requirement to disclose information to investors and corporate governance adoption is voluntary. Over recent years, the AIM has taken steps to improve its formal regulation, which allows an examination to take place on how effective increasing regulation is in improving the quality of companies and how they communicate with investors. Furthermore, apart from the compulsory disclosure of price-sensitive information, all other disclosures on AIM are voluntary. This, coupled with the fact that most AIM companies tend to be SMEs, and disclosing information is a costly strategy,

information asymmetries will, in theory, be more profound on this market. Therefore, AIM provides a unique setting to analyse whether disclosure policies and corporate governance compliance affects a company's information asymmetries and how this impacts on the wider agency problem.

The above has provided a brief overview of AIM and its unique institutional setting. The remainder of this chapter will provide a detailed background of AIM, its regulation, the role of Nomads, and corporate governance issues affecting AIM. This chapter will also include all of the extant literature that corresponds to this market, which will help highlight any gaps in the existing literature as well as corroborate and support the analysis that is undertaken in this thesis.

### **3.2 Background**

In 1995, the Alternative Investments Market (AIM) replaced the Unlisted Securities Market (USM) to provide a trading platform for small and growing companies without incurring the strict listing procedures and costs associated with the Main Market. AIM is owned by the London Stock Exchange (LSE) and solely regulated and monitored by Nomads. AIM has been growing steadily over the years and has now become the leading market for SMEs. *Table 3.1* shows 3,512 companies (correct at *June 2014*) that have listed on this market since its launch and more than £87 billion has been raised. The table also highlights that although new admissions reached a peak in 2007 they have since been in decline. The market capitalisation of companies listing on AIM also peaked in 2007 at £97m and has subsequently been in decline. However,

figures for 2013 and 2014 have shown an improvement at over £75m but this is still not close to the 2007 levels.

AIM has also attracted companies switching from the Main Market, potentially highlighting that companies are keen to take advantage of the relaxed approach to regulatory enforcement. In addition to the market switching, AIM is also gathering an international reputation with around 20% of its listed companies being registered outside the UK (AIM statistics [online], June 2014). Furthermore, Vismara et al (2012) document that there is a greater proportion of companies migrating downwards from the Main Market to AIM than those migrating upwards. This evidence also corroborates the findings in *Table 3.1* that AIM is attracting larger listings with companies choosing to switch down from the Main Market. *Table 3.2* demonstrates how these admissions are distributed over the different industry sectors. The table shows that the *Financials sector* has the greatest number of companies as well as the largest companies (based on market capitalisation). This is closely followed by the Industry sector. Interestingly, there are some 50 companies more in the Industry sector than in the Oil and Gas sector, yet the latter is almost double the size according to market capitalisations. This suggests that the Oil and Gas companies that are listed on AIM are very large in size.

AIMs success is evident given its rapid growth, migrations to the platform from the Main Market, and the worldwide replications of AIM (all discussed in the next section). In addition to this, AIM is also attracting an increasing number of foreign listings. For example, Doidge et al (2009) states that New York exchanges had 74% more foreign listings than the London exchanges in 1998; by 2005 they had only 59%

more foreign listings than London. However, when AIM is omitted from this analysis, the results are very different. Without AIM, the New York exchanges had 92% more foreign listings than London in 1998. By 2005, they had 165% more foreign listings. These figures suggest that the attractiveness of London by foreign listings is due to the success of AIM. Similarly, Piotroski and Srinivasan (2008) study the impact on Sarbanes-Oxley (2002) (SOX) on foreign listing behaviour. The study finds that although US listings post SOX provide a bonding mechanism for companies as they have to comply with greater corporate governance regulation, small companies cannot afford the costs associated with these listings. Instead, the study reveals that there are a set of companies that choose to list on the AIM rather than US exchanges due to the costs of incorporating SOX. However, these companies are found to be smaller, less profitable and more likely to engage a lower quality auditor than the companies that already list on US exchanges.

Another factor that might be attributed to AIM's success and attractiveness is its location. London is one of the main financial centres in the world with sophisticated technology, institutional investors and an array of foreign companies (Mendoza, 2008). These London characteristics might also explain why the other countries that have tried to replicate the AIM have not had the same level of success. However, the idea that London is integral to the success of AIM companies is refuted by Amini and Keasey (2012). This study examines the failure probability of UK Initial Public Offerings (IPOs) on the AIM. The study purports that AIM is dominated by London-based IPOs as well as companies in the *Financials* industry and that these two factors lead to higher probability of failure given the relative ease at which these companies can list on AIM even though they may be small with limited experience.

The results show significant evidence that AIM companies experience higher failure rates the closer they are to London. The study also reports the rationale behind these results could be that London-based companies are of lower quality and therefore more susceptible to failure. Another reported reason is that financial companies in London engage in riskier projects/products than their regional counterparts, which fundamentally increases the risk of failure to that firm.

**Table 3.1 History of AIM Admissions**

	Number of companies			Market value (£m)	Number of admissions			Money raised (£m)		
	UK	International	Total		UK	International	Total	New	Further	Total
19/06/1995	10	0	10	82.2						
1995	118	3	121	2,382.4	120	3	123	71.2	25.3	96.5
1996	235	17	252	5,298.5	131	14	145	521.3	302.3	823.6
1997	286	22	308	5,655.1	100	7	107	341.5	350.2	691.7
1998	291	21	312	4,437.9	68	7	75	267.5	317.7	585.2
1999	325	22	347	13,468.5	96	6	102	333.7	600.2	933.9
2000	493	31	524	14,935.2	265	12	277	1,754.1	1,338.3	3,092.4
2001	587	42	629	11,607.2	162	15	177	593.1	535.3	1,128.4
2002	654	50	704	10,252.3	147	13	160	490.1	485.8	975.8
2003	694	60	754	18,358.5	146	16	162	1,095.4	999.7	2,095.2
2004	905	116	1021	31,753.4	294	61	355	2,775.9	1,880.2	4,656.1
2005	1,179	220	1,399	56,618.5	399	120	519	6,461.2	2,481.2	8,942.4
2006	1330	304	1,634	90,666.4	338	124	462	9,943.8	5,734.3	15,678.1
2007	1347	347	1,694	97,561.0	197	87	284	6,581.1	9,602.8	16,183.9
2008	1233	317	1,550	37,731.9	87	27	114	1,107.8	3,214.5	4,322.3
2009	1052	241	1,293	56,632.0	30	6	36	740.4	4,861.1	5,601.6
2010	967	228	1,195	79,419.3	76	26	102	1,219.4	5,738.1	6,957.6
2011	918	225	1,143	62,212.7	67	23	90	608.8	3,660.3	4,269.1
2012	870	226	1,096	61,747.7	47	24	71	707.1	2,448.7	3,115.8
2013	861	226	1,087	75,928.6	77	22	99	1,187.2	2,728.1	3,915.4
<b>2014 to May</b>	<b>875</b>	<b>224</b>	<b>1,099</b>	<b>76,335.9</b>	<b>42</b>	<b>10</b>	<b>52</b>	<b>1,498.3</b>	<b>1,501.0</b>	<b>2,999.3</b>
<b>Launch to date</b>					<b>2,889</b>	<b>623</b>	<b>3,512</b>	<b>38,299.0</b>	<b>48,805.3</b>	<b>87,064.3</b>

Table shows the number of companies admitted to AM since its launch as well as the money raised from the IPO. Source: AIM statistics June 2014 [online], accessed 11/6/2014.

**Table 3.2 Listings by Industry**

Equities	Total Value (£)	No of Shares	No of Companies	Capitalisation (£m)
Oil & gas	422,761,904	4,480,171,641	131	10,894
Basic Materials	182,965,299	5,987,883,229	178	5,229.1
Industrials	298,818,303	494,242,124	193	10,371.6
Consumer Goods	59,687,376	359,841,255	64	4,994.7
Healthcare	154,985,499	605,987,990	67	5,306.8
Consumer Services	1,000,099,690	10,338,563,558	113	11,479.6
Telecommunications	265,651,634	549,383,856	15	2,545.0
Utilities	14,799,662	441,195,174	15	1,241.3
Financials	401,785,220	3,076,908,139	209	15,525.6
Technology	531,673,233	2,241,672,009	114	8,727.9
<b>Total Equities</b>	<b>3,333,227,819</b>	<b>28,575,848,975</b>	<b>1,099</b>	<b>76,335.85</b>

Table displays the number and size of companies over each industry sector. Source: AIM statistics June 2014 [online], accessed 11/6/2014.

### **3.2.1 AIM Replications**

AIM's achievements have resulted in a number of markets across the world replicating some of its characteristics, although these platforms are yet to experience the same level of success. For example, Mercato Expandi was formed in Italy in 2003. It intended, like AIM, to attract the listing of smaller companies through less stringent procedures. However, in July 2007 the London Stock Exchange (LSE) acquired the Italian Stock Exchange and as a result the Mercato Expandi was transformed into AIM Italy. Similarly, the Euronext introduced the Alternext in 2005 to attract small and medium enterprises (SME's) by simplifying regulation and lowering cost barriers to entry to allow these SMEs easier access to the equity market<sup>1</sup>. As of December 2013 there are still only 184 listed companies on the Alternext with a market capitalisation of €8,325bn. This is substantially lower than the AIM with much smaller companies listings on it.

More recently, in 2009, the joint venture between the LSE and the Tokyo Stock Exchange (TSE) saw the introduction of Tokyo AIM, which replicates the London AIM's system of control with similar features, such as Japanese Nominated Advisors (J-Nomads). Despite the success of the UK AIM, Tokyo AIM went two years without any listings until Mebiopharm joined on 15 July 2011. However, in March 2012, the Tokyo Stock Exchange (TSE) decided to acquire LSE's 49% stake in Tokyo-AIM and make the platform a wholly owned subsidiary of the TSE. Tokyo-AIM was then renamed the TOKYO PRO Market and currently has eight companies listed on it (June 2014). Although the attempts to replicate AIM have garnered little success, the fact

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<sup>1</sup> As of April 2007, now part of NYSE group after merger.

that other countries have tried to adopt similar trading platforms highlights the success and attractiveness of AIM. Furthermore, given that AIM is a more established market for SMEs, it stands to reason that international listings would choose AIM rather than its own country's counterpart as AIM's reputation is more established with more available investors/equity finance.

### **3.2.2 AIM Migrations**

Alongside the rapid expansion of the AIM, company migration from the Main Market down to AIM has also been documented in recent studies. Jenkinson and Ramadorai (2008) examine the consequences of companies switching between two markets with different regulatory regimes – AIM and the LSE Main Market. The study states that between 1995 and 2006, 267 companies switched down to AIM and 73 switched up to the Main Market. The substantial migrations down to AIM highlights the attractiveness of listing on a market with minimal regulation. Jenkinson and Ramadorai (2008) go on to analyse the performance of companies making such migrations. Intuitively, negative announcement returns would be expected as investors should prefer higher level of regulation and in times of scandals such as Enron or economic crisis, regulation is often increased. The most prominent example of this is the introduction of Sarbanes-Oxley Act (2002). As expected, the announcement effect for companies switching down to AIM were significantly negative (around -5%). However, the operating performance over the 2-year period after the switch is significantly positive indicating that managers choosing to migrate to the lesser-regulated market segment are actually acting in the best interest of the shareholders. Similarly, Campbell and Tabner (2014) also examine the effects of

migrations between AIM and the Main Market between 1995 and 2010 with special attention paid to the agency risk premium. The study finds the same negative announcement day returns as well as the positive performance earned after the switch down is made. Campbell and Tabner (2014) suggest that the reason for this positive post-switch reaction is the reward to investors for bearing the increased risks and agency costs associated with listing on AIM due to the less regulated nature of this market compared to the Main Market.

### **3.2.3 Criticisms of AIM**

#### **Survival Rates**

In 2007, Roel Campos, the commissioner at the US securities and exchange commission (SEC) said, *“I’m concerned that 30% of issuers that list on AIM are gone in a year. That feels like a casino to me and I believe that investors will treat it as such”*. In response, the London Stock Exchange stated that the number of companies that go into liquidation per year is less than 2%. Espenlaub et al (2012) examined the survival rates of AIM listed companies from their IPO to see whether the rates differed from other markets and whether regulatory levers made a difference to a company’s survival. To do this, survival analysis is used on a sample of 918 admissions from 1995-2004. The results show that the median survival time is 76 months, which is consistent with the US and Canadian survival rates they use as a benchmark. In addition to survival rates, Espenlaub et al (2012) also examines the effect of regulatory levers such as Nomad reputation, public float, size and age on survival rates. The findings are all statistically significant, except for public float, and indicate that stronger regulation has a positive effect on survival rates. The results from Espenlaub

et al (2012) and the statement from the LSE provide evidence refuting the claims made by Roel Campos that AIM suffers from high levels of delisting. Furthermore, this is the only AIM study that examines the effect of regulation and the significant results provide motivation to study regulation on AIM more directly. There is a need to examine whether there is an improvement in the disclosure/quality of companies or whether companies already act accordingly due to outside pressure from investors or Main Market competitors.

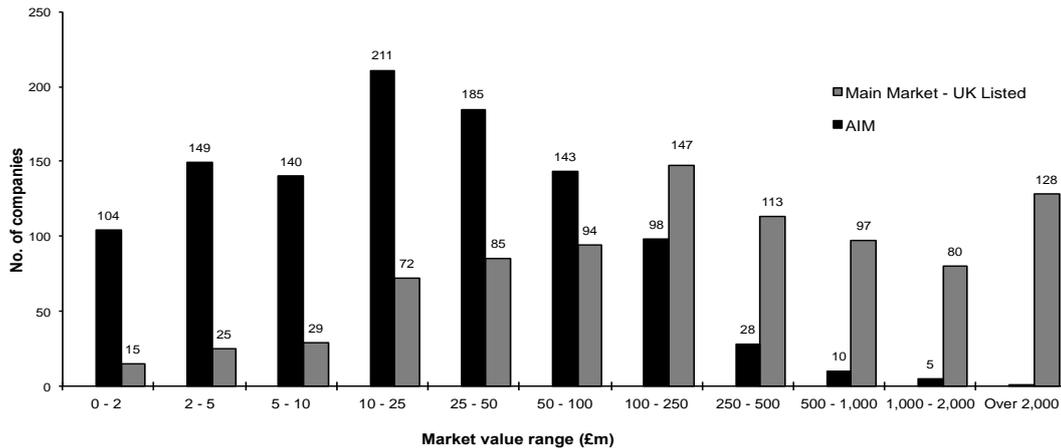
### **Size and Thin Trading**

One concern thought to jeopardise the longevity of AIM is the perceived illiquidity of the shares listed. Litvinstevev (2009) reports that AIM's insufficient trading volume and low market capitalisations could make shares illiquid. However, *Figure 3.1* illustrates the market values of companies listed on AIM compared to those listed on the Main Market<sup>2</sup>. As expected, a greater proportion of the largest companies are listed on the Main Market but a greater proportion of the mid-sized companies are actually listed on AIM, suggesting that the upper-end of AIM market may not be as thinly traded as Litvinstevev (2009) argues. In addition, it has also been suggested that smaller companies listed on AIM are more liquid than they would be if they were listed on the Main Market, as their shares are not as thinly traded on AIM (Litvinstevev, 2009).

### **Figure 3.1 Distribution of Companies by Market Value**

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<sup>2</sup> Appendix 3.1 provides an updated table for this data but does not include the Main Market comparison. The distribution is similar and shows that most a greater proportion of companies have a MV between £10 and £25 million.



The figure illustrates the distribution of company size for both Main Market and AIM listed companies. The number above each bar represents the number of companies at each Market value range Source: AIM statistics December 2012 [online], accessed 18/1/2013.

### 3.3 AIM Regulation

The main attraction and integral to the success of AIM is the relaxed approach the market takes to regulation. AIM is an exchange-regulated market which allows AIM to function differently to other markets as they do not have to follow the EU directives on Listing Rules and are not regulated directly by the FCA (Espenlaub et al, 2012). In addition, this unique regulatory structure means AIM is also exempt from The Markets in Financial Instruments Directive (MiFID). This exemption allows AIM to operate outside the EU's desire towards regulatory harmonisation. In fact, the AIM has very few listing requirements and the costs associated with listing are lower than other markets (Litvinsteve, 2009). Mendoza (2008) estimates the costs associated with listing on AIM compared to the costs of listing on the NASDAQ. He estimates that a \$50m listing costs around \$3,426,300 on AIM compared to \$4,472,000 on the NASDAQ. This disparity becomes even greater when Mendoza estimates the on-going costs of these listings. Due to the greater compliance costs associated on the regulated NASDAQ, the on-going costs are approximately \$2,017,500 per annum compared with just \$147,300 per annum on AIM.

*Table 3.3* demonstrates the differences between the listing requirements of AIM and the Main Market. The requirement to engage a Nomad at all times on AIM appears to be the strictest requirement as there are almost no other barriers to entry given that no minimum free-float, market cap or trading records are required (Leitterstorf et al, 2008). This contrasts significantly with the Main Market where such limitations are put in place. The simplicity of these listing procedures significantly reduces the length of the admission process to around 3-6 months, increasing the attractiveness of AIM (Jenkinson and Ramadorai, 2010). The reduced regulatory burden also allows SME's the opportunity to raise capital through an IPO by avoiding a costly primary market listing. In addition, relaxed admission procedures and low listing costs may have increased the success of AIM by attracting companies that would otherwise have been unsuitable for the Main Markets.

**Table 3.3 Regulatory Differences Between the Main Market and AIM**

<b>Admission Process</b>	<b>AIM</b>	<b>Main Market</b>
1. Free Float	No minimum percentage of shares to be in public hands	Minimum 25% shares in public hands
2. Trading Record	No trading record requirement	Three-year trading record required
3. Admission Document	Admission documents not checked by Exchange or UKLA	Admission documents inspected by the UKLA
4. Nomad Requirement	Nominated adviser required at all times	Sponsors needed for certain transactions
5. Market Capitalisation	No minimum market capitalisation	Minimum market capitalisation of £700,000

Table shows the difference in listing rules between the AIM and the Main Market. Source: Joining AIM Guide, [online], accessed 18/1/13.

AIM does have enforceable regulation but is limited to three forms: AIM Rules for Companies (May 2014), AIM Rules for Nomads (May 2014) and AIM Disciplinary Procedures (May 2014). The AIM rules are principle-based regulation rather than the more formal rules-based regulation. This allows companies greater discretion when

deciding how to interpret regulation and allows companies to explain the rules they do not intend to follow and why they have chosen not to follow them, or rather a ‘comply or explain’ approach (Litvinsteve, 2009; Espenlaub et al, 2012).

Despite being a largely self-regulated platform, AIM has had to introduce certain external regulations such as the International Financial Reporting Standards (IFRS) in order to internationally harmonise accounting systems and make companies more transparent (Christensen and Walker, 2007). EU companies initially implemented the IFRS system in 2005. However, this was not required for the AIM listed companies until 1<sup>st</sup> January 2007 when AIM firms were required to produce their accounts in accordance with IFRS. The adoption of IFRS has made disclosure requirements more demanding than those previously applied by UK Generally Accepted Accounting Principles (GAAP). AIM companies now have to follow stricter accounting policies and their interim and final reports must now be consistent over all periods to allow appropriate comparison. For example, the IFRS conceptual framework uses the term ‘probable’ evidence for the recognition of assets and liabilities whereas the UK GAAP uses ‘sufficient.’ This implies that there will be greater recognition and disclosure of intangible assets under the IFRS. The adoption of the IFRS marked the first time AIM companies were required to follow externally and compulsory mandated regulation.

### **3.3 Nominated Advisers**

One of the unique features of the AIM market is the advisory service provided by Nominated Advisers (Nomads). A Nomad’s role is to ensure that all AIM quoted

companies comply with all the necessary listing requirements. Nomads use their considerable discretion to judge whether a firm meet the appropriate standards to be listed. These Nomads also decide whether they wish to accept a firm as a client or even delist a client if it compromises the integrity of the London Stock Exchange (LSE) (Livinstev, 2009). The Nomad must also maintain this advisory role after their client has listed by ensuring the company adheres to the AIM Rules for Companies (Arcot et al, 2007). The latest version of the AIM rules for Companies was published in May 2014 and contains 45 rules that each company must follow, with each Nomad responsible for ensuring that this is the case. These AIM Rules replaced the previous version from 2010 and provided updates on AIM Rule 11 on the Disclosure of price sensitive information. The changes updated the terminology to be more in line with that of the Financial Services and Markets Act 2000 so that disclosure practices now reflect general market practice. The other main change is to AIM 26, whereby a company must now provide details of its corporate governance arrangement where it does not adopt either the Combined Code or the QCA Guidelines for Smaller Listed Companies. Other key rules include, AIM Rule 1 that states all AIM companies must retain a Nomad and failure to secure a Nomad will lead to the immediate suspension of the company's shares. After one month without a suitable Nomad replacement, the company's listing is then cancelled. Consequently, it is important for companies to choose an appropriate Nomad, who will aid the company's goals and objectives and thus avoid unnecessary Nomad switches that could be costly to the company.

#### **3.4.1 Nomad Regulation and Discipline**

The monitoring and advisory role of Nomads requires them to follow the set of rules provided by the LSE to ensure that the needs of investors are protected and the integrity of the exchange is maintained. The latest *AIM Rules for Nomads* were published in May 2014. The rules outline the responsibilities of Nomads and the disciplinary action they will face if they fail to carry out their role appropriately. Rule 16 states that all Nomads must act with “*due skill and care*”. Rule 29 goes further, stating that any Nomad in violation of the rules will be disciplined accordingly. This includes fines, censure, or removal of the Nomad from the register. Furthermore, Rule 21 asserts that Nomads must be independent from the companies they represent and that the burden of proof is with the Nomad to demonstrate their independence or any conflict of interest. The practice of due diligence and the requirement for independence highlights the risky nature of being a Nomad and implies that investors have the right of recourse to seek compensation for any failure made by a Nomad that directly affects an investor’s financial position. To date, there have been three recorded incidents of Nomad breaches that have resulted in censure or fine.

This first occurred in October 2007 when the Nomad, Nabarro Wells & Co were fined £250,000 and publicly censured as they were in breach of the Nomad Rules. Specifically, the LSE took this action against Nabarro Wells because:

- Their systems and controls did not satisfy the Eligibility Criteria for Nomads;
- They failed to act with due skill and care;
- They failed to undertake the necessary level of due diligence to assess the appropriateness of certain companies for admission to AIM; and

- They failed to make due and careful enquiry into whether certain AIM companies' admission documents complied with the AIM rules.

On 22<sup>nd</sup> June 2009, the LSE issued a disciplinary notice to Blue Oar Securities (now Astaire Securities) as they were in breach of both the AIM rules for companies and the AIM rules for Nomads after failing to act with due diligence by not appropriately assessing the company Worthington Nicholls before helping it to float in 2006. Once listed, Blue Oar Securities then helped the company issue an array of misleading trading statements which helped the company's shares leap from the 50p offer price to a peak of 194p. However, within a few months, a profit warning was issued and the shares crashed to 19p. They consequently incurred a public censure and a fine of £225,000 (Aggregated Regulatory News Service, ARNS, 2009).

Most recently, on 21<sup>st</sup> December 2011, the Nomad, Seymour Pierce was censured and fined £400,000 for failing to execute due diligence when considering the appropriateness of two companies requesting to list on AIM between 2010 and 2011.<sup>3</sup>

The AIM disciplinary committee (ADC) found that Seymour Pierce:

- Did not provide proper advice and guidance to an AIM company in respect of its obligations to make announcements without delay, specifically relating to its changing financial situation and liabilities;

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<sup>3</sup> <http://www.londonstockexchange.com/companies-and-advisors/aim/advisers/aim-notices/aim-notice-ad11.pdf>

- Did not satisfy its obligation to the LSE to undertake adequate due diligence and to properly assess the appropriateness of a company seeking admission to AIM.

### **3.4.2 Nomad Eligibility**

As the Nomad is the principal regulator they too have to follow a set of criteria in order to be eligible for Nomad status. For example, they must be a firm rather than an individual; have practised corporate finance (i.e. provided corporate finance advice as their principal business) for a minimum of two years and performed a minimum of three relevant transactions within that period; and they must employ at least four qualified executives (Nomad Rule 2). There are also annual fees payable to the LSE in order to maintain Nomad status, the amount depending on the number of companies represented. Nomad rules 7 and 13 set out the details of the initial application fee and on-going fees to be paid. The specifics of these fees are shown in *Table 3.4*. The table demonstrates that the annual fees paid by Nomads range from £11,500-£34,400 depending on the number of companies they oversee.

The on-going Nomad fees payable to the LSE might inhibit smaller firms from being able to continue as a Nomad or limit the number of clients they are able to supervise as smaller Nomads may not be in a position to have these costs absorbed by their clients through the fees they charge. That is, a small Nomad might have to increase their fees to a point where the client may be better-off hiring a large Nomad that might be more reputable. Furthermore, while this set of eligibility criteria and associated costs might be restrictive for small companies wishing to seek Nomad status, it is

relatively unchallenging for large companies such as KPMG and Deloitte. This may raise concerns regarding the level of oversight provided by Nomads although these larger companies may have more reputational concerns providing them with incentives to deliver stronger regulatory and advisory oversight.

**Table 3.4 Nomad Fees**

Number of Companies	Fee
(Application fee)	£20,000
0-5	£11,500
6-15	£17,200
16-39	£22,900
40+	£34,400

Table shows the annual fees Nomads are charged to maintain their Nomad status. The fees are calculated depending on the number of companies they represent. Source: <http://www.londonstockexchange.com/companies-and-advisors/aim/publications/fees/aim-fees-2011-2012.pdf>

### 3.4.3 Nominated Brokers

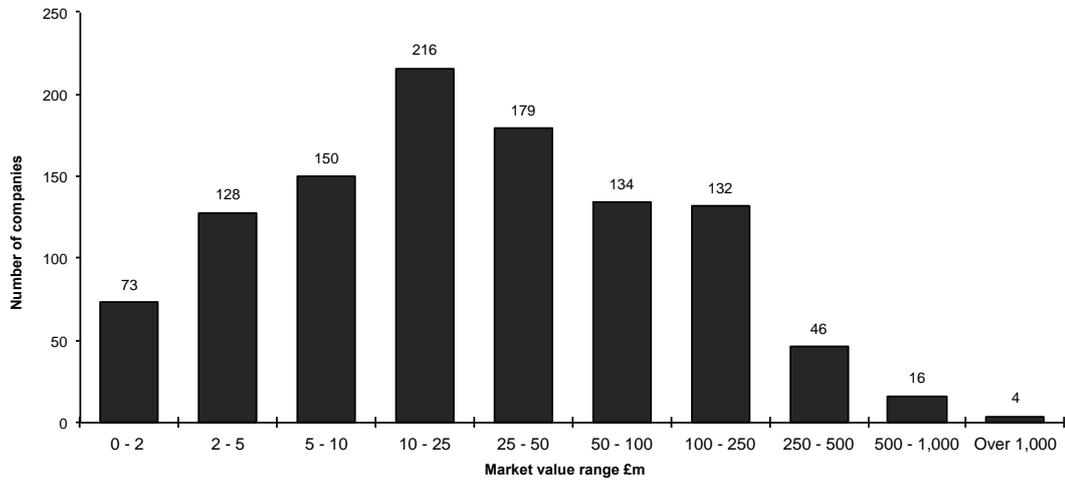
While a Nomad acts in an advisory capacity and implements the rules set out by the LSE, Nominated Brokers (NomadBro) provide additional brokering services over and above their Nomad function. They evaluate the level of interest in the company's shares at the IPO and subsequent seasoned equity offerings (SEOs). A company may consequently have the same Nomad and Broker as long as they can prove that safeguards are implemented to ensure independence and eliminate any conflicts of interest. In addition, the NomadBro will act as a financial adviser to the company, guiding companies on market and investment opportunities.

As with Nomads, AIM companies are required to employ a NomadBro at all times or risk suspension/cancellation. Interestingly, Mallin and Ow-Yong (2010) conducted

interviews with, among others, two Nomads who also acted as NomadBros. The interviews revealed that these Nomads place more importance on the brokerage services they offered their clients than the advisory Nomad services.

## Appendix 3.1 Updated Figure

**Figure 3.2 Distribution of Companies by Equity Market Value**



More up-to date version of Figure 3.1 but it does not include the Main Market comparison. Source: AIM statistics June 2014 [online], accessed 11/6/2014.

### 4.1 Introduction

This thesis examines different aspects of corporate governance in relation to the AIM market, with the overriding arc being to extend the knowledge into the role of Nomads. These unique advisers provide a joint advisory service and regulatory service. Nomads provide a central role into the success of the AIM market through their oversight and supervisory powers granted to them by the LSE. Therefore, their perceived reputation might provide key insights into the role they play on AIM and with the interactions they have with the companies they represent.

Espenlaub (2012) introduces the concept of Nomad reputation, which was found to be significantly related to survival rates. Given this, a manager could switch to a higher quality Nomad to bond themselves to investors, as by inference management will be paying more for superior and better quality monitoring. Most recently, Gerakos et al (2011) studies the post-listing performance of AIM companies. The study examines whether AIM firms are able to use the choice of Nomad and auditor as a bonding mechanism, using past Nomad performance and whether the Nomad also acts as the market-maker as the two measures for Nomad reputation. The results are insignificant for market-maker influence but there is significant evidence that companies perform better when they hire a Nomad who has positive previous experience in listing companies that went on to perform relatively better than other companies. Although there has been little prior literature pertaining to the role of Nomads, the findings so far indicate that performance is improved when a firms hires an experienced Nomads while a reputable Nomads is positively related to the survival rate of the firm.

This chapter develops the concept of Nomad reputation by Espenlaub et al (2012) and constructs a more inclusive index, aggregating different proxies for reputation. Analysis and evidence in support of the index is provided in the next chapter, where annual returns around the announcement of Nomad switches will be analysed to see whether a switch to a more reputable Nomad experiences a positive market reaction, supporting the idea and importance of Nomad reputation. The reputation index that is constructed to test whether Nomad reputation is an important examination of AIM and whether reputable Nomads can positively influence the quality of corporate governance structures of the firms they represent.

The index used in this thesis extends the work by the Espenlaub et al (2012) index. *Table 4.1* sets out the seven variables in the index alongside the 5 variables in the Espenlaub et al (2012) paper for comparison. This study does not use Espenlaub et al's (2012) variables specifically referring to company IPO as this is not relevant to this study. Furthermore, Age of Nomad and Nomad Return on Assets were found to be heavily skewed in favour of large banks and long-standing accounting firms who did not represent a large portion of the sample clients. Explanations of the seven variables in this study will be described in more detail in the next section.

**Table 4.1 Nomad Reputation Factors**

<b>Reputation Index</b>	<b>Espenlaub et al (2012) 5-factor Index</b>
Number of Clients per Nomad	Number of issues the Nomad backed a year prior to the IPO
Sustained Nomad	Proceeds of issues they backed in year prior to IPO

Net Losers	Nomad Credit Score in year of IPO
Net Gainers	Nomad firm return on assets
MV of Nomad Clients	Age of Nomad
Credit Score	
Reporting Lag	

Table compares the variables used to measure Nomad reputation in this thesis, compared to Espenlaub et al (2012)

In order to assess whether a company has made a switch to a more or less reputable Nomad, the 72 Nomads are split into quintiles. The median is 36.5, and there are around 15 Nomads in each section. This allows comparison to see whether the switch is up, down or lateral. *Table 4.2* presents the results of the ranking system for each of the seven variables in the index. For brevity, it displays the Nomad ranking for the Top 15 Nomads and the Bottom 15 Nomads within the sample. Although in different positions, the Nomad rankings are highly associated with many Nomads appearing more than once throughout the seven variables. Brewin Dolphin and Seymour Pierce Ltd appear in the top 15 in all seven variables. On the other end of the scale, Mirabaud Securities plc appears in the bottom 15 in every category.

As well as testing for switch-up and switch-downs within the ranking categories, switches up to the top 5-Nomads will be tested to see whether the reaction is stronger for a more concentrated group of reputable Nomads. The motivation for this analysis is that Espenlaub et al (2012) found that the reaction was stronger when testing the top five within each category and the results get weaker when more Nomads are added to the ranking system. Therefore, analysis for concentration of the most reputable Nomads will also be explored in Chapter Five. Furthermore, as well as testing the market reaction to switches within each ranking category, analysis will be carried out to test the reaction to switches when testing against a combined equally weighted aggregate rank of all seven reputation variables. The results for the aggregate ranking

system are shown in *Table 4.3*. The ranking strongly reflects the results from the individual variables with Seymour Pierce Ltd and Brewin Dolphin at the top of the ranking.

Once the combined aggregate Nomad reputation index is examined and verified, this index will be used in Chapter six and seven in order to assess the corporate governance role of Nomads. More specifically, how a reputable Nomad motivates Corporate Governance Compliance, and whether they influence the level of voluntary disclosure of the firms they represent.

**Table 4.2 Nomad Reputation Index: Top-15 and Bottom-15**

<b>RANK</b>	<b>MV RANK</b>	<b>Sustained Nomads</b>	<b>Net Losers</b>	<b>Net Gains</b>	<b>No. of Clients per Nomad</b>	<b>Reporting Lag</b>	<b>Credit Score</b>
1	Brewin Dolphin	Brewin Dolphin	WH Ireland Ltd.	Teather & Greenwood	Seymour Pierce Ltd.	Teather & Greenwood	Seymour Pierce Ltd.
2	Investec Bank plc	Seymour Pierce Ltd.	Brewin Dolphin	Astaire Securities plc	Brewin Dolphin	Brewin Dolphin	Arbuthnot Securities Ltd.
3	Seymour Pierce Ltd.	KBC Peel Hunt	Seymour Pierce Ltd.	FinnCap	KBC Peel Hunt	Numis Securities Ltd.	Brewin Dolphin
4	J.P. Morgan Securities Ltd	Shore Capital Stockbrokers	Cenkos Securities plc	Seymour Pierce Ltd.	Evolution Securities Ltd.	Seymour Pierce Ltd.	Kaupthing Singer & Friedlander
5	Numis Securities Ltd.	Canaccord Adams Ltd.	Shore Capital Stockbrokers	Cenkos Securities plc	Teather & Greenwood	KBC Peel Hunt	Brown, Shipley & Co. Ltd.
6	Evolution Securities Ltd.	Numis Securities Ltd.	Arbuthnot Securities Ltd.	Evolution Securities Ltd.	Arbuthnot Securities Ltd.	Arbuthnot Securities Ltd.	Altium Capital Ltd.
7	Collins Stewart	Charles Stanley Securities	Nomura Code Securities Ltd.	Arbuthnot Securities Ltd.	Numis Securities Ltd.	Evolution Securities Ltd.	Numis Securities Ltd.
8	Teather & Greenwood	Collins Stewart	Strand Hanson Ltd.	Panmure Gordon (UK) Ltd.	Astaire Securities plc	Investec Bank plc	WH Ireland Ltd.
9	KBC Peel Hunt	Evolution Securities Ltd.	Zeus Capital Ltd.	Brewin Dolphin	Collins Stewart	Cenkos Securities plc	Collins Stewart
10	Panmure Gordon (UK) Ltd.	Daniel Stewart & Co plc	Altium Capital Ltd.	Daniel Stewart & Co plc	Cenkos Securities plc	Altium Capital Ltd.	Hawkpoint Partners Ltd.
11	Cenkos Securities plc	Grant Thornton	Evolution Securities Ltd.	HB Corporate	FinnCap	Astaire Securities plc	Shore Capital Stockbrokers
12	Arbuthnot Securities Ltd.	WH Ireland Ltd.	FinnCap	Numis Securities Ltd.	Canaccord Adams Ltd.	Charles Stanley Securities	Cenkos Securities plc
13	WH Ireland Ltd.	Arbuthnot Securities Ltd.	John East and Partners Ltd.	Canaccord Adams Ltd.	Panmure Gordon (UK) Ltd.	FinnCap	Dawnay, Day C.F Ltd
14	Altium Capital Ltd.	Hanson Westhouse Ltd.	KBC Peel Hunt	Investec Bank plc	Charles Stanley Securities	Oriel Securities	Ernst & Young
15	Shore Capital Stockbrokers	Investec Bank plc	Beaumont Cornish Ltd.	WH Ireland Ltd.	Investec Bank plc	Arden Partners plc	Oriel Securities

**Table 4.2 Nomad Reputation Index: Top-15 and Bottom-16 (Continued)**

<b>RANK</b>	<b>MV RANK</b>	<b>Sustained Nomads</b>	<b>Net Losers</b>	<b>Net Gains</b>	<b>No. of Clients per Nomad</b>	<b>Reporting Lag</b>	<b>Credit Score</b>
58	Dawnay, Day C.F Ltd.	Liberum Capital Ltd.	KPMG corporate	Merrill Lynch International	Dresdner Kleinwort	KPMG corporate	Panmure Gordon (UK) Ltd.
59	Singer Capital Markets	Marshall Securities Ltd.	Liberum Capital Ltd.	Mirabaud Securities LLP	Marshall Securities Ltd.	Libertas Capital C.F	Zeus Capital Ltd.
60	Marshall Securities Ltd.	Matrix Corporate Capital LLP	Marshall Securities Ltd.	Nabarro Wells & Co. Ltd.	Cairn Financial Advisers Ltd.	Liberum Capital Ltd.	Nomura Code Securities Ltd.
61	Blomfield C.F Ltd.	Merrill Lynch International	Matrix Corporate Capital LLP	Orbis Equity Partners Ltd.	Ernst & Young	Marshall Securities Ltd.	Mirabaud Securities LLP
62	Goodbody Stockbrokers	Mirabaud Securities LLP	Merrill Lynch International	Ruegg & Co	HSBC bank	Merrill Lynch International	Fairfax I.S. PLC
63	Liberum Capital Ltd.	Morgan Stanley	Mirabaud Securities LLP	Westwind Partners (UK) Ltd.	Merrill Lynch International	Mirabaud Securities LLP	Marshall Securities Ltd.
64	Westwind Partners (UK) Ltd.	Nabarro Wells & Co. Ltd.	Morgan Stanley	Bridgewell Securities Ltd.	Orbis Equity Partners Ltd.	Morgan Stanley	Nabarro Wells & Co. Ltd.
65	Orbis Equity Partners Ltd.	Orbis Equity Partners Ltd.	Nabarro Wells & Co. Ltd.	Brown, Shipley & Co. Ltd.	GMP Securities Europe LLP	Nabarro Wells & Co. Ltd.	RBC Capital Markets
66	Mirabaud Securities LLP	RBC Capital Markets	Orbis Equity Partners Ltd.	Dawnay, Day C.F Ltd.	Goodbody Stockbrokers	Orbis Equity Partners Ltd.	Smith & Williamson C.F Ltd.
67	Ernst & Young	Ruegg & Co	Piper Jaffray Ltd	Durlacher Ltd	KPMG corporate	Piper Jaffray Ltd	Matrix Corporate Capital LLP
68	GMP Securities Europe LLP	Singer Capital Markets	Ruegg & Co	Ernst & Young	Liberum Capital Ltd.	Ruegg & Co	Hanson Westhouse Ltd.
69	Cairn Financial Advisers Ltd.	Teather & Greenwood	Singer Capital Markets	HSBC bank	Mirabaud Securities LLP	Smith & Williamson C.F Ltd.	Insinger
70	davy Corp	Williams De Broe	Smith & Williamson C.F Ltd.	Insinger De Beaufort	Ruegg & Co	Strand Hanson Ltd.	Libertas Capital C.F
71	ING C.F	Zeus Capital Ltd.	Williams De Broe	KPMG corporate	Westwind Partners (UK) Ltd.	Williams De Broe	HSBC bank
72	Ruegg & Co	Westwind Partners (UK) Ltd.	Westwind Partners (UK) Ltd.	Williams De Broe	Bridgewell Securities Ltd.	Westwind Partners (UK) Ltd.	Bridgewell Securities Ltd.

The table displays the top 15 and bottom 15 Nomad rankings for each on the seven measures of Nomad reputation. The numbers beside the Nomad name is Nomad identification number within the sample.

**Table 4.3 Aggregate Ranking System**

<b>Rank</b>	<b>Nomad</b>	<b>Rank</b>	<b>Nomad</b>
1	Seymour Pierce Limited	37	Dowgate Capital Advisers Limited
2	Brewin Dolphin	38	Kaupthing Singer & Friedlander
3	Arbuthnot Securities Limited	39	Zeus Capital Limited
4	Numis Securities Limited	40	Dawnay, Day Corporate Finance Limited
5	KBC Peel Hunt	41	Deloitte Corporate Finance
6	Cenkos Securities plc	42	Hichens, Harrison & Co. plc
7	WH Ireland Limited	43	Fairfax I.S. plc
8	Evolution Securities Limited	44	Dresdner Kleinwort
9	Teather & Greenwood	45	Matrix Corporate Capital LLP
10	Altium Capital Limited	46	Durlacher Limited
11	Collins Stewart	47	Blomfield Corporate Finance Limited
12	Shore Capital Stockbrokers	48	Morgan Stanley
13	Investec Bank plc	49	Libertas Capital Corporate Finance
14	Canaccord Adams Limited	50	Williams De Broe
15	Charles Stanley Securities	51	Bridgewell Securities Limited
16	FinnCap	52	Smith & Williamson Corporate Finance Limited
17	Daniel Stewart & Co plc	53	Merrill Lynch International
18	Panmure Gordon (UK) Limited	54	Ernst & Young
19	Arden Partners plc	55	Fox-Davies Capital Limited
20	Astaire Securities plc	56	Singer Capital Markets
21	Strand Hanson Limited	57	Liberum Capital Limited
22	J.P. Morgan Securities Limited	58	Cairn Financial Advisers Limited
23	Ambrian Partners Limited	59	Davy Corp
24	Oriel Securities	60	Piper Jaffray Limited
25	Grant Thornton	61	Goodbody Stockbrokers
26	Nomura Code Securities Limited	62	Insinger
27	John East and Partners Limited	63	KPMG Corporate
28	Beaumont Cornish Limited	64	HSBC Bank
29	HB Corporate	65	Nabarro Wells & Co. Limited
30	Hoare Govett Limited	66	GMP Securities Europe LLP
31	Noble & Company Limited	67	ING Corporate Finance
32	Hanson Westhouse Limited	68	Marshall Securities Limited
33	Jefferies International Limited	69	Orbis Equity Partners Limited
34	Hawkpoint Partners Limited	70	Ruegg & Co
35	RBC Capital Markets	71	Mirabaud Securities LLP
36	Brown, Shipley & Co. Limited	72	Westwind Partners (UK) Limited

The table displays the aggregate ranking of all seven reputation variables over two columns. The ID number is the Nomad identification number within the sample.

## **4.2 Reputation Index**

The following tables in this section provide further explanations on each of the seven ranking categories within the Nomad Reputation Index. Given that the focus of the first study is on providing evidence supporting the Nomad Reputation Index through the use of examining Nomad switches, the remainder of this chapter will also include descriptive stats on the number of switches to and from reputable Nomads, to reduce repetition and cross-posting. Although further explained in Chapter five, given the gap in the literature pertaining to Nomad Reputation, the literature supporting the use of these variables are found in auditor literature as they have similar characteristics, with regard to the assurances they provide the LSE, that make for appropriate theoretical comparisons.

### **4.2.1 MV of Nomad Clients**

The first variable in the Nomad Reputation Index is the Market Value (MV) of each of the companies the Nomad represents. This is an average of the year-end MV over the whole four-year sample period. The MV category will give an indication of Nomad size and therefore a sign of reputation as large Nomad firms might be considered more reputable (Lin et al; 2009, Knechel et al; 2007). *Table 4.4* displays the results for the top and bottom ten Nomads in the MV ranking system. *Panel A* shows that most switch-ups were made in the 06/07 financial year and reduced over the rest of the four-year sample period. However, the number of switch-downs actually increases over the sample period. This may be due to Nomad fees as Chen et al (2007) finds that the market has begun to look more favourably to switching down to less reputable auditors in order to be exposed to lower fees. The sample reasoning

might equally be applicable to Nomad switches. It should be noted that with only a total of seven switch-downs, this is not enough for adequate analysis. Adequate analysis can be undertaken on switch-ups as there are 128 observations suitable for analysis. Further analysis will also be carried out on the top-five switch-ups to see whether the reaction is stronger for a more concentrated group of reputable Nomads.

**Table 4.4 Direction of Switches for MV Rank**

<b>Panel A: Top 15</b>	06/07	07/08	08/09	09/10	<b>TOTAL</b>
Switch-Ups	49	39	20	20	<b>128</b>
Lateral Switches	-	8	8	12	<b>28</b>
<b>Panel B: Bottom 15</b>					
Switch-Downs	1	1	2	3	<b>7</b>
Lateral Switches	-	2	-	-	<b>0</b>
<b>Total Switches</b>	<b>50</b>	<b>50</b>	<b>30</b>	<b>35</b>	<b>165</b>

Table shows the results for the direction of switches in the highest and lowest quintile for MV rank. Switches are made up into that quintile, down into that quintile, and laterally within the quintile.

#### **4.2.2 Sustained Nomad**

The second measure of Nomad reputation is by the sustained Nomads. This is a rank of Nomads who represent the highest proportion of companies that make no switches over the four-year sample period. That is, they represent the most clients that don't switch to another Nomad throughout the four years. This could highlight firm quality, as the Nomad is willing to stay with that company throughout the company's listing on AIM. It could also mean the firm is more compliant with the AIM rules as the Nomad is held responsible for any departure from the rules and would therefore resign if a company did not conform entirely. On the other hand, continued Nomad tenure may be a sign of Nomad quality as any company that is unhappy with the way their Nomad conducts their business would dismiss or switch them.

Similarly to the previous category, *Table 4.5* displays the results for top- and bottom-ten Nomads in the sustained Nomad ranking system. It shows how many switches were made to Nomads that are in the sustained Nomads ranking category. *Panel A* shows that most switch-ups were made in the 06/07 financial year and reduced over the rest of the four-year sample period with 21 in year two, 20 in year three and 22 in the final year. There are also a total of 72 switch-downs in this category, which is adequate for analysis and will be tested to see whether the market reacts more severely to switch-downs.

**Table 4.5 Direction of Switches for Sustained Nomad Rank**

<b>Panel A: Top 15</b>	06/07	07/08	08/09	09/10	<b>TOTAL</b>
Switch-Ups	47	21	20	22	<b>110</b>
Lateral Switches	-	3	9	7	<b>19</b>
<b>Panel B: Bottom 15</b>					
Switch-Downs	11	24	17	20	<b>72</b>
Lateral Switches	-	4	2	7	<b>13</b>
<b>Total Switches</b>	<b>58</b>	<b>52</b>	<b>48</b>	<b>56</b>	<b>214</b>

Table shows the results for the direction of switches in the highest and lowest quintile for Sustained Nomad rank. Switches are made up into that quintile, down into that quintile, and laterally within the quintile.

### 4.2.3 Net Losers

The third variable in the sample is the proportion of net losers. This is the percentage number of AIM companies a Nomad loses each year and then averaged for all four years to produce the overall net losers ranking index. A Nomad who retains the most companies over the four-year sample period is ranked number one in the index and the Nomad who loses the most companies is ranked at the bottom of the index. *Table 4.6* shows the results for the top and bottom 15 switch-ups/downs for the net losers ranking system. Similar to the previous two categories, there are more switch-ups than switch-downs and most of the switch-ups occur in the 06/07 financial year. Furthermore, the

number of switch-downs decreases over the four years from 16 down to two in the final year. The number of lateral switches in both *Panel A* and *B* show an increase in such switches suggesting that more companies over the years, in both sub-sets, were making more side-ways switches to Nomads of equal reputation.

**Table 4.6 Direction of Switches for Net Losers Rank**

<b>Panel A: Top 15</b>	06/07	07/08	08/09	09/10	<b>TOTAL</b>
Switch-Ups	39	23	26	27	<b>115</b>
Lateral Switches	-	1	5	6	<b>12</b>
<b>Panel B: Bottom 15</b>					
Switch-Downs	16	23	6	2	<b>47</b>
Lateral Switches	-	3	4	10	<b>17</b>
<b>Total Switches</b>	<b>55</b>	<b>50</b>	<b>41</b>	<b>45</b>	<b>191</b>

Table shows the results for the direction of switches in the highest and lowest quintile for Net Losers rank. Switches are made up into that quintile, down into that quintile, and laterally within the quintile.

#### 4.2.4 Net Gainers

As well as net losers, the fourth variable accounts for the total number of switches made to each Nomad by including a net gainers index. The data collection reveals that many companies switched to specific Nomads. For instance there were a greater number of switches to particular Nomads highlighting the presence of popularity switching. The results from these findings are displayed in *Table 4.7*. In total, AIM companies switch between 72 different Nomads during the sample period. The table indicates that some Nomads are preferred over others. The top ten Nomads each experience a minimum of 17 switches to their firm. Teather and Greenwood appears to be the most popular with 36 switches made to their firm followed by Astaire Securities with 34. Nine Nomads did not experience any switches to their firm and these Nomads are ranked at the bottom of the ranking system.

**Table 4.7 Frequency of Switches between Individual Nomads**

Rank	Nomad	Y1	Y2	Y3	Y4	Total
1	Teather & Greenwood	5	18	13	0	36

Rank	Nomad	Y1	Y2	Y3	Y4	Total
2	Astaire Securities plc	12	2	4	16	34
3	FinnCap	3	7	12	11	33
4	Seymour Pierce Limited	10	3	6	7	26
5	Cenkos Securities plc	9	5	5	5	24
6	Evolution Securities Limited	12	1	2	7	22
7	Arbuthnot Securities Limited	8	1	8	4	21
8	Panmure Gordon (UK) Limited	3	14	1	2	20
9	Brewin Dolphin	5	5	2	5	17
10	Daniel Stewart & Co plc	4	3	6	4	17
11	HB Corporate	5	3	0	7	15
12	Numis Securities Limited	5	4	3	2	14
13	Canaccord Adams Limited	2	3	5	3	13
14	Investec Bank plc	3	3	5	2	13
15	WH Ireland Limited	2	3	2	4	11
16	Altium Capital Limited	1	2	4	3	10
17	Ambrian Partners Limited	2	1	6	1	10
18	Strand Hanson Limited	2	2	2	4	10
19	Collins Stewart	6	1	2	0	9
20	Arden Partners plc	1	1	5	1	8
21	Fairfax I.S. PLC	0	0	5	3	8
22	J.P. Morgan Securities Ltd	1	0	1	6	8
23	Beaumont Cornish Limited	2	2	2	1	7
24	Charles Stanley Securites	2	1	3	1	7
25	Matrix Corporate Capital LLP	0	1	3	3	7
26	Dowgate Capital Advisers Limited	0	1	4	1	6
27	John East and Partners Limited	0	3	2	1	6
28	Smith & Williamson	1	1	2	2	6
29	Zeus Capital Limited	0	1	3	2	6
30	Grant Thornton	0	3	2	0	5
31	Hanson Westhouse Limited	1	2	2	0	5
32	KBC Peel Hunt	2	1	1	1	5
33	Nomura Code Securities Limited	2	2	0	1	5
34	Singer Capital Markets	0	0	0	5	5
35	Dawnay, Day Corporate Finance Limited	3	1	0	0	4
36	Jefferies International Limited	3	0	0	1	4
37	Noble & Company Limited	1	1	2	0	4
38	RBC Capital Markets	0	2	2	0	4
39	Shore Capital Stockbrokers	1	2	1	0	4
40	Fox-Davies Capital Limited	1	0	2	0	3
41	Hoare Govett Limited	2	0	1	0	3
42	Oriel Securities	2	1	0	0	3
43	Blomfield Corporate Finance Limited	0	2	0	0	2
44	Cairn Financial Advisers Limited	0	0	0	2	2
45	Hawkpoint Partners Limited	1	0	1	0	2
46	Hichens, Harrison & Co. plc	1	1	0	0	2
47	ING Corporate Finance	2	0	0	0	2
48	Kaupthing Singer & Friedlander	0	2	0	0	2
49	Morgan Stanley	2	0	0	0	2
50	Piper Jaffray Ltd	0	0	0	2	2
51	Deloitte Corporate Finance	0	1	0	0	1
52	Dresdner Kleinwort	1	0	0	0	1
53	GMP Securities Europe LLP	0	0	1	0	1
54	Goodbody Stockbrokers	1	0	0	0	1
55	Libertas Capital Corporate Finance	1	0	0	0	1
56	Liberum Capital Limited	0	0	0	1	1
57	Marshall Securities Limited	0	1	0	0	1
58	Merrill Lynch International	0	0	1	0	1
59	Mirabaud Securities LLP	0	0	0	1	1
60	Nabarro Wells & Co. Limited	1	0	0	0	1
61	Orbis Equity Partners Limited	0	1	0	0	1
62	Ruegg & Co	0	0	1	0	1
63	Westwind Partners (UK) Limited	0	0	1	0	1
64	Bridgewell Securities Limited	0	0	0	0	0
65	Brown, Shipley & Co. Limited	0	0	0	0	0
66	Davy Corp	0	0	0	0	0
67	Durlacher Ltd	0	0	0	0	0
68	Ernst & Young	0	0	0	0	0
69	HSBC Bank	0	0	0	0	0
70	Insinger	0	0	0	0	0
71	KPMG corporate	0	0	0	0	0
72	Williams De Broe	0	0	0	0	0

Table shows the total number of switches to each of the Nomads listed above. The Nomads with the most switches to their firm are ranked highest.

*Table 4.8* shows the results for the top and bottom 15 switch ups/downs for the net Gainers ranking system. Once again, there are more switch-ups than switch-downs and most of the switch-ups occur in the 06/07 period. Furthermore, the number of switch-downs decreases over the four years from three down to one in the third year. The number of lateral switches in *Panel A* increases suggesting that more companies over the years were making more side-ways switches to Nomads of equal reputation. However, there are no observed lateral switches for the bottoms ten Nomad and the number of switch-downs is too small for testing in an event study.

**Table 4.8 Direction of Switches for Net Gainers**

<b>Panel A: Top 15</b>	06/07	07/08	08/09	09/10	<b>TOTAL</b>
Switch-Ups	67	33	24	28	<b>152</b>
Lateral Switches	-	11	6	15	<b>32</b>
<b>Panel B: Bottom 15</b>					
Switch-Downs	3	1	1	-	<b>5</b>
Lateral Switches	-	-	-	-	<b>0</b>
<b>Total Switches</b>	<b>70</b>	<b>45</b>	<b>31</b>	<b>43</b>	<b>189</b>

Table shows the results for the direction of switches in the highest and lowest quintile for Net Gainers rank. Switches are made up into that quintile, down into that quintile, and laterally within the quintile.

#### 4.2.5 Number of Clients per Nomad

The fifth variable to explain Nomad reputation is the Number of Clients per Nomad ranking. This is a ranking of the average number of clients each Nomad represents over the four-year sample period. It takes into consideration the fact that some companies retain their Nomad for more than one year as well as Nomads having more companies switch to and from their firms in the four years. The Nomad who represents the most companies is ranked at the top of the index while the Nomad who represents the least is at the bottom of the ranking. The top and bottom 15 Nomads for the client per Nomad ranking are shown in *Table 4.8* in the previous section.

*Table 4.9* shows the results for the top and bottom 15 switch ups/downs for the Number of Clients per Nomad ranking system. There are more switch-ups than switch-downs and most of the switch-ups occur in the 06/07 period. The number of switch-downs increases over the four years although there is still only a total of seven observations, which is too small to run analysis against. The number of lateral switches in *Panel A* increases from one to 11 in the third year indicating an increasing preference of side-ways switches to Nomads of equal reputation. However, there are no observed lateral switches for the bottom ten Nomads.

**Table 4.9 Direction of Number of Total Clients per Nomad Rank**

<b>Panel A: Top 15</b>	06/07	07/08	08/09	09/10	<b>TOTAL</b>
Switch-Ups	62	38	24	42	<b>166</b>
Lateral Switches	-	1	11	4	<b>16</b>
<b>Panel B: Bottom 15</b>					
Switch-Downs	1	1	3	2	<b>7</b>
Lateral Switches	-	-	-	-	<b>0</b>
<b>Total Switches</b>	<b>63</b>	<b>40</b>	<b>38</b>	<b>48</b>	<b>189</b>

Table shows the results for the direction of switches in the highest and lowest quintile for Total Clients per Nomad rank. Switches are made up into that quintile, down into that quintile, and laterally within the quintile.

#### 4.2.6 Nomad Credit Score

The penultimate variable in the Nomad Ranking System is the Nomad Credit Score. This score is the QuiScore and is downloaded from Fame. It is a measure of the probability of company failure in the year following the date of calculation. The score ranged from 0-100 with 100 being the best score with minimal chance of firm failure. Therefore, in the Nomad Credit Score, the Nomads with the highest score are ranked first and vice versa. *Table 4.10* presents the results for the top and bottom 15 switch ups/downs for the Nomad Credit Score ranking system. There are more switch-ups than switch-downs and most of the switch-ups occur in the 06/07 period. The number

of switch-downs increases in the third year but drops back down to three in the final year and there are only three lateral observation in the bottom 15 category indicating a small sample size in *Panel B*. Finally, there are a total of 11 lateral switches in *Panel A* and most of these occur in the third year.

**Table 4.10 Direction of Switches for Nomad Credit Score Rank**

<b>Panel A: Top 15</b>	06/07	07/08	08/09	09/10	<b>TOTAL</b>
Switch-Ups	39	19	20	21	<b>99</b>
Lateral Switches	-	3	5	3	<b>11</b>
<b>Panel B: Bottom 15</b>					
Switch-Downs	3	3	7	3	<b>16</b>
Lateral Switches	-	2	1	-	<b>3</b>
<b>Total Switches</b>	<b>43</b>	<b>27</b>	<b>33</b>	<b>27</b>	<b>130</b>

Table shows the results for the direction of switches in the highest and lowest quintile for Nomad Credit Score rank. Switches are made up into that quintile, down into that quintile, and laterally within the quintile.

#### 4.2.7 Reporting Lag

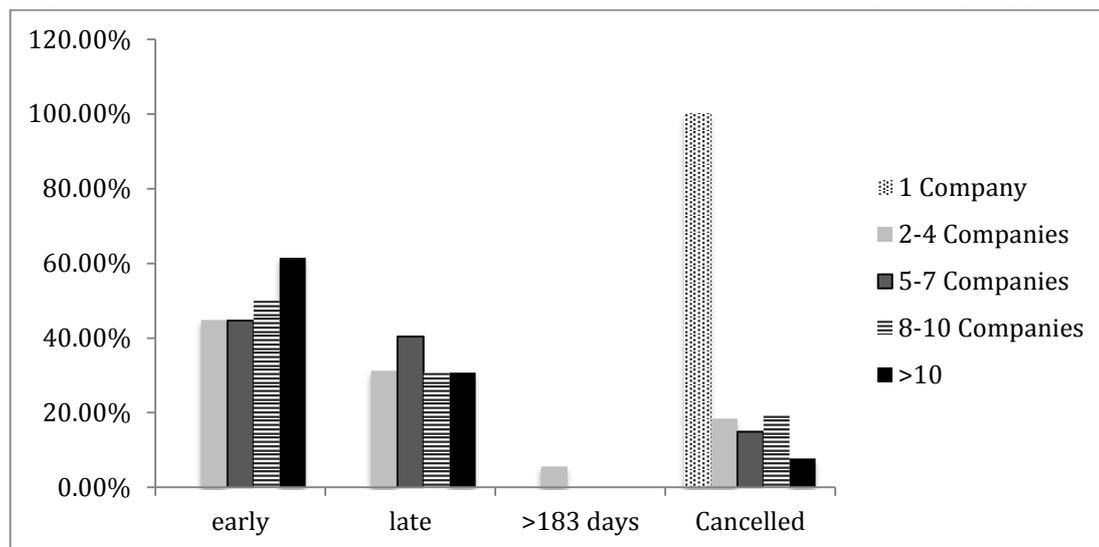
The second hypothesis asserts that companies might choose to switch to a more lenient Nomad, who may be willing to overlook how carefully the AIM rules are implemented and followed. This could be seen as a form of opinion shopping as the management of these companies may choose to change their Nomad to one known to be considered less reputable and less likely to challenge the company for not complying with the AIM rules. Given that one of the unique features of AIM is the considerable discretion regarding the six-month period that companies get to release their results, timeliness of their reporting may be a suitable proxy to measure the leniency of certain Nomads. It would be expected that more lenient Nomads would represent companies that have a greater reporting lag, while stricter Nomads will supervise companies that report more timeously.

To see whether there is such a relationship between reporting lag and Nomads, the median reporting lag was calculated for the entire sample. This was found to be 91.5 days, which is also almost half the total amount of days required by the LSE under the AIM Rules. Furthermore, the three month median also corresponds to the time allowed for firms listed on the Main Market. Firms are now grouped into early (<91 days) and late (>91 days), and for comparison, a group of late reporters (>183 days) along with another section of the sample companies that have subsequently been delisted are included for comparison, but not incorporated into the reporting lag analysis. The Nomads are then grouped in order of the number of companies they supervise which will also indicate Nomad size. The first category is the Nomads who only represent one AIM company and these categories then increase by size of Nomad, the largest being the Nomad who supervises more than 10 companies.

*Figure 4.1* illustrates the results when Nomad size is plotted over the early and late lags. The histogram clearly shows that the largest Nomads (who supervise >10 companies) represent companies who report their final results in the earliest quintile and none of these companies incur suspensions by reporting over the 183-day limit (the histogram in *Figure 4.1* shows a gap in the >183 category as none of the larger companies are suspended). The other categories are quite evenly distributed although the two smallest Nomads are the only categories to supervise companies that are subsequently suspended due to late reporting. When looking at the size of Nomad that represents the companies that are then cancelled from AIM, it is clear that the results are in reverse order according to size. That is, the smallest Nomads exhibit a greater number of supervisee cancellations while the largest Nomads incur relatively few. There appears to be a negative relationship with the size of Nomad and the length of

the reporting lag. It might also be concluded that larger Nomads are more rigorous than smaller Nomads when enforcing the AIM rules. This supports the use of the reporting lag variable index, as larger Nomads are stricter than smaller Nomads, making them more reputable.

**Figure 4.1 Total Distribution of Nomads Over Different Reporting Lags**



Nomad Size is plotted over different reporting lag quintiles. The largest Nomad with over 10 companies report earlier than other Nomads. The distribution of cancelled companies is also reported. It shows that more companies are cancelled when represented by small Nomads and there are no large Nomads that incur suspension at the >183 day mark.

Although proxy for strict vs. lenient Nomads in the second hypothesis, the reporting lag will form part of the Nomad Reputation Index. It will be carried out individually to assess the validity of the second hypothesis and also as part of an aggregate rank for Nomad reputation. It is applicable to Nomad reputation as a stricter Nomad might be perceived as more reputable by investors given that they will encourage companies to comply comprehensively with the AIM rules which will, in turn, protect the needs of investors. *Table 4.11* presents the results for the top and bottom 10 switch-ups/downs for the reporting lag ranking system. There are more switch-ups than switch-downs and most of the switch-ups occur in the 06/07 period and halves by the fourth year to 30 switches. The number of switch-downs fluctuates over the sample period but

reaches its peak in the fourth year with eight switches. In *Panel A* the number of lateral switches increases from one to 11 in the third year, indicating a preference to stay with the top 15 most reputable Nomads.

**Table 4.11 Direction of Switches for Reporting Lag Rank**

<b>Panel A: Top 15</b>	06/07	07/08	08/09	09/10	<b>TOTAL</b>
Switch-Ups	62	42	29	30	<b>163</b>
Lateral Switches	-	1	11	5	<b>17</b>
<b>Panel B: Bottom 15</b>					<b>0</b>
Switch-Downs	6	7	5	8	<b>26</b>
Lateral Switches	-	-	1	-	<b>1</b>
<b>Total Switches</b>	<b>68</b>	<b>50</b>	<b>46</b>	<b>43</b>	<b>207</b>

Table shows the results for the direction of switches in the highest and lowest quintile for Reporting Lag rank. Switches are made up into that quintile, down into that quintile, and laterally within the quintile.

Finally, *Table 4.12* displays industry statistics for the most popular year-end. Unsurprisingly, December is the most popular year-end for AIM companies, across all industry sectors, followed by June and then March. Around 40% of all industries document a December year-end with the exception of Utilities who observe nearly 75% December year-ends. However, this is due to the relatively small amount of companies available in the utilities industry.

**Table 4.12 Year-end Frequency**

Industry Group	No. of Companies	Most Common Year End	No. of Companies with that year end	
BMATR	59	31-Dec-06	25	42%
CNSMG	38	31-Dec-06	14	37%
CNSMS	78	31-Dec-06	32	41%
HLTHC	43	31-Dec-06	17	40%
INDUS	108	31-Dec-06	46	43%
OILGS	48	31-Dec-06	21	44%
TECNO	71	31-Dec-06	29	41%
TELCM	8	31-Dec-06	3	38%
UTILS	8	31-Dec-06	6	75%

Table reports the number of companies with December year-ends over the different industry sectors.

## APPENDIX 4.1 List of Nomads

- 1 Altium Capital Ltd.
- 2 Ambrian Partners Ltd.
- 3 Arbuthnot Securities Ltd.
- 4 Arden Partners plc
- 6 Astaire Securities plc
- 7 Beaumont Cornish Ltd.
- 8 Blomfield Corporate Finance Ltd.
- 10 Brewin Dolphin
- 11 Bridgewell Securities Ltd.
- 12 Brown, Shipley & Co. Ltd.
- 13 Cairn Financial Advisers Ltd.
- 14 Canaccord Adams Ltd.
- 15 Cenkos Securities plc
- 16 Charles Stanley Securities
- 18 Collins Stewart
- 20 Daniel Stewart & Co plc
- 21 Dawnay, Day Corporate Finance Ltd.
- 22 Davy Corp
- 23 Deloitte Corporate Finance
- 24 Dowgate Capital Advisers Ltd.
- 25 Dresdner Kleinwort
- 26 Durlacher Ltd
- 27 Ernst & Young
- 28 Evolution Securities Ltd.
- 29 Fairfax I.S. PLC
- 30 FinnCap
- 31 Fox-Davies Capital Ltd.
- 32 GMP Securities Europe LLP
- 33 Goodbody Stockbrokers
- 34 Grant Thornton
- 35 Hanson Westhouse Ltd.
- 36 Hawkpoint Partners Ltd.
- 37 HB Corporate
- 38 Hichens, Harrison & Co. plc
- 39 Hoare Govett Ltd.
- 40 HSBC bank
- 41 ING Corporate Finance
- 42 Insinger
- 43 Investec Bank plc
- 44 J.P. Morgan Securities Ltd
- 45 Jefferies International Ltd.
- 46 John East and Partners Ltd.
- 47 Kaupthing Singer & Friedlander
- 48 KBC Peel Hunt
- 49 KPMG corporate
- 50 Libertas Capital Corporate Finance
- 51 Liberum Capital Ltd.
- 52 Marshall Securities Ltd.
- 53 Matrix Corporate Capital LLP
- 54 Merrill Lynch International
- 55 Mirabaud Securities LLP
- 56 Morgan Stanley
- 57 Nabarro Wells & Co. Ltd.
- 58 Noble & Company Ltd.
- 59 Nomura Code Securities Ltd.
- 60 Numis Securities Ltd.
- 61 Orbis Equity Partners Ltd.
- 62 Oriel Securities
- 63 Panmure Gordon (UK) Ltd.
- 64 Piper Jaffray Ltd
- 65 RBC Capital Markets
- 67 Ruegg & Co
- 68 Seymour Pierce Ltd.
- 69 Shore Capital Stockbrokers
- 70 Singer Capital Markets
- 71 Smith & Williamson
- 72 Strand Hanson Ltd.
- 73 Teather & Greenwood
- 75 WH Ireland Ltd.
- 76 Williams De Broe
- 77 Zeus Capital Ltd.
- 78 Westwind Partners (UK) Ltd.

### 5.1 Introduction

The background provided in the previous chapter highlights the key role Nomads play in the success of the companies they represent, as well as the AIM as a whole. Their monitoring role as the principal regulator makes them a key corporate governance mechanism that helps mitigate the agency problem. This theory is supported by Jensen and Meckling (1976) who state that monitoring and bonding must be undertaken to limit the actions of the management and keep the principal-agent relationship aligned. The corporate governance role played by Nomads also leads to a potential bonding mechanism between managers and shareholders. Similar to auditors, Nomad firms are different sizes and have different levels of experience.

In addition to Nomad switching playing a bonding role for managers, it is possible that managers also seek to signal information to investors when adopting these switching strategies. Once again, using auditor literature to support this theory, Bar-Yosef and Livnat (1984) find that when a manager is confident about future cash flows, they will engage a larger, more reputable auditor indicating a signalling effect about the future prospects of the firm. This can also be applied to Nomads, as if the company is performing well and the management is confident about the internal governance structures it has employed, the manager may be more willing to make a costly switch-up to a more reputable Nomad. In doing so, they will be subject to greater monitoring and scrutiny which will provide a signal of company quality to investors.

However, a manager may not always make a Nomad switch to a more reputable Nomad. It is also possible that managers might decide to make a downward switch to a less reputable Nomad. Given that corporate governance adoption is voluntary and regulation is limited, this leads to considerable managerial discretion for AIM managers to make decisions. As highlighted in chapter one, Williamson (1963) states that inadequate monitoring and control of management allows considerable scope in the operational running of the company. This discretion can lead to managers making wealth-destroying decisions that are not in the best interests of investors. One such decision might be to lower the quality of their external monitoring by hiring a less reputable Nomad. If investors view such a switch as a mistake, it is possible for investors to punish this perceived poor decision-making using market discipline, by selling a portion of their shares to depress share prices enough to curtail management's behaviour.

As well as the role of Nomads, another important consideration is the informal and flexible approach to regulation. AIMs structure raises questions about AIM quoted companies' ability to incorporate suitable and sufficient quality corporate governance mechanisms given the cost involved with implementing such measures. Although governance codes are voluntary, they are encouraged to adopt them (Mallin and Ow-Yong, 2012; Leitterstorf et al, 2008).

Given that there is incentive to incorporate quality corporate governance structures, the monitoring role provided by Nomads becomes increasingly important to protect the interest of shareholders and the reputation of the market as a whole. This study examines this role by creating a Nomad reputation index, which is used to test how the

market responds to Nomad switching. This, in turn, allows determination of whether switching-up to a more reputable Nomad is seen as a positive bonding mechanism by the market. Similarly, it will also provide evidence as to whether the market disciplines companies for making an unnecessary switch-down to a less reputable Nomad. The ranking is also concentrated to the top-5 Nomads, in order to establish whether the market perceives a hierarchy of Nomads, as they do with auditors, while also corroborating the finding of Espenlaub et al (2012) who use the top-5 Nomads to correspond to the most reputable.

Taking into consideration the above literature pertaining to Nomads, this study makes the following contributions. Firstly, it will directly examine the relation between the choice of Nomad and company performance using event study methodology. The results provide significant evidence of a market reaction to Nomad switches when there is a switch-up to a more reputable Nomad. To the best of my knowledge, this is the first study that analyses the market reaction to Nomad switches when considering Nomad reputation.

The findings in this study show that the market responds favourably when there is a switch to a reputable Nomad, which places emphasis on the importance of careful Nomad selection. Secondly, this study extends the idea of Nomad reputation presented by Espenlaub et al (2012) and creates an inclusive Nomad reputation index, used to rank the Nomads in terms of their calculated reputation. The index is based upon the aggregate of seven different reputation factors including: number of clients, market value and Nomad credit score. The Nomad reputation index takes inspiration from Espenlaub et al (2012) in terms of the credit score variable but does not include their

other variables, which relate more specifically to IPO proceeds. Instead this index encompasses a wider variety of variables making it more comprehensive and suitable for this particular study and for future replication. Finally, this study introduces the idea of 'lenient Nomads' whereby managers may hire a lenient Nomad who might be prepared to overlook the careful adherence to the AIM rules. This action is detrimental to shareholders as non-compliance, to the small amount of regulation that AIM imposes, can reduce their reputation, or on occasions, result in the company being suspended or even cancelled.

## **5.2 Literature Review & Hypotheses**

### **5.2.1 Nomad Changes and Comparison with Auditor Literature**

To date there has been very little research carried out on the AIM market and the role of Nomads despite Nomads being an integral component to AIM's success. Espenlaub et al (2012) studies IPO survival within the AIM and finds that Nomad reputation is a statistically significant factor contributing to the success of the issuing company. The Mallin and Ow-Yong (2010) study carried out interviews with directors, institutional investors and Nomads to determine the ethical and corporate governance implications when investing on the AIM. Their findings show that the role of Nomads is fundamental to the success of AIM with many companies depending on their Nomad for advice on implementing a suitable corporate governance structure. In an earlier study, Mallin and Ow-Yong (1998) study the admission documents of the first 241 companies to join AIM, to assess the level of corporate governance disclosure using the UK Corporate Governance Code (then known as the combined code) as a basis for analysis. The study finds that companies not raising new capital at admission have significantly weaker corporate governance structures, and companies who hire a Nomad, who also acts as their broker, pay greater attention to the UK Corporate Governance Code.

This limited body of literature highlights an opportunity to further study the idea of Nomad reputation reported in Espenlaub et al (2012), and the importance of their role within the AIM, by analysing their role further and in respect to Nomad changes. However, discussion of Nomad switches is difficult without prior literature to consult.

Although engaged to perform two different functions within the firm, the theoretical rationale for choosing to switch to a more reputable auditor should be consistent with the decision to switch Nomad. As discussed in chapter two, the presence of information asymmetries causes a lack of trust between the principal and agent requiring the need of governance mechanisms, such as the audit, to reduce the asymmetry and associated agency costs. External audit reinforces trust and confidence in financial reporting. Clinch et al (2012) examines audit quality and information asymmetries between traders and find that Big-4 auditors are associated with lower information asymmetries. Prior literature also confirms that switches to Big-4 auditors are seen positively by investors (Fan and Wong, 2005; Yosef and Livnat, 1984). Given the relaxed approach to regulation on AIM, there is potential for large asymmetries as there is a low disclosure burden for firms. Therefore, like the choice of auditor, the choice of Nomad might also be key in improving information asymmetries given their supervisory and monitoring role.

Although, Nomads and auditors are employed to carry out two different functions, their governance role and characteristics are similar. For example, both must be independent from the company they represent, and while auditors must provide reasonable assurances to company stakeholders that the financial statements they audit are free from material misstatements, Nomads must also provide similar guarantees to the LSE with regards to the appropriate application of the AIM Rules for companies. This similarity of role may explain why the most reputable Nomad firms also provide audit services. The behavioural and economic factors behind the decision to choose one auditor over another may be extrapolated to decisions over the choice of Nomad.

Therefore, this study will compare the expected effects and causes of Nomad changes with those arising from actual auditor switches/ resignations/dismissals.

There are many reported explanations as to why a company might change their auditor and some are equally applicable to Nomad changes on the AIM market. Moreover, not all of these reasons are necessarily harmful to the company's shareholders. Williams (1988) and Beattie and Fearnley (1995) contend that auditor switches are prompted by a variety of influencing factors such as: fees, opinion shopping, litigation risk, auditor quality, agency conflicts and information suppression. It is clear that some of these rationales may even enhance the position of the shareholder. Shopping around for cheaper fees and moving up to a perceived higher quality auditor should be considered as legitimate reasons to switch auditor, whereas 'opinion shopping' is likely to be harmful to shareholders' long-term interests. Similarly, shopping around for cheaper Nomad fees or switching to a more reputable Nomad should also be viewed as a positive strategy in the market. More specifically, there are intuitive reasons why a manager might switch up to a more reputable Nomad, or down to a less reputable Nomad. However, theoretical support for these arguments does not exist. Therefore, the following section will explore these intuitive explanations for Nomad switches and apply auditor literature for support.

### **5.2.2 Nomad Size**

Auditor switching has been well studied and become increasingly popular in recent years due to the Enron scandal and subsequent demise of the former Big Five auditor, Arthur Anderson. One of the main reported theories behind such switching is auditor

reputation. There are different components to an auditor's perceived reputation. One of the most significant is size. The largest international auditing firms (The Big-4) are considered to be pre-eminent in the market as their size and internationally recognizable brand name mean they have more capital and resources to undertake better quality audits (Becker et al, 1998; Beatty, 1989; DeAngelo, 1981; Palmrose, 1988). Dopuch and Simunic's (1982) paper on competition in the auditing profession concluded that investors make judgements regarding the quality of different auditors based on product differentiation whereby large audit firms are considered to be more credible as they have greater resources at their disposal. Therefore, switches to these firms would be a key signal of company quality and a positive market reaction should be observed. This argument is supported by Knechel et al (2007) who find significant evidence to support a directional theory: that when company switches to(from) a Big-4 auditor, the market reacts positively(negatively) to the announcement. However, there are documented inconsistencies with the above findings. Nichols and Smith (1983) find no statistically significant evidence to a positive(negative) reaction to switch-ups(switch-downs).

In more recent studies, Chen et al (2007) studies the market reaction when switching down from the Big-4. The paper finds that since the demise of Arthur Anderson the market reaction has been positive towards downward switches despite the perception that smaller firms provide inferior auditing services. The main documented reason for this is a reduction in fees, and the reaction is even greater when larger companies choose to make a downward switch to a small auditor. Weiss and Kalbers (2008) studies auditor changes but separates the sample to observe whether the effects of switches are different between small and large companies. The study finds that

switches are treated differently according to company size: the changes in small companies returns around the period of an auditor change were not significant, while the subset of large companies were. Lin et al (2009) explore the market reaction to and from the top-ten largest auditors in China. Consistent with prior literature, they find that the market reacts positively when companies switch to a top-ten auditor as the company is signalling to the market that they are financially well positioned. However, Chan et al (2011) Nichols and Smith (1983) and Schwartz and Soo (1996) find no significant evidence that the market responds to changes to and from the Big-4.

The above literature confirms that a change to a large auditor is received positively in the market. The same theory can be applied to Nomad switches. Given the central role that Nomads play in supervising and monitoring the companies they represent, an investor might prefer the appointment of a more popular Nomad that is already proven its success in supporting many other companies. The Nomads with the most clients could be considered as superior over those who only represent a handful of firms as popularity could signal quality, in the same way as a switch to a Big04 auditor. Therefore, the market should positively react to the switch to such Nomads. This study uses a sample of 464 AIM companies over a four-year period represented by a set of 73 Nomads. Of these 73 Nomads, the top ten represented 55% of the entire sample's market value. This concentration among the top-ten Nomads highlights a distinctive set of 'large Nomads'.

As alluded to in Chapter four, the market value of Nomad firms is heavily skewed towards established accounting and finance firms whole only represent one or two

clients each. However, this is not representative of the size of the Nomad services provided by other firms. Therefore this first hypothesis will use the number of clients the Nomad represents as well as the market value (MV) of the clients as a proxy for Nomad size. Intuitively, it would be expected that Nomad firms with the greatest number of clients, along with consideration of those representing the largest clients, would be a good indicator of the size of a Nomad. The analysis undertaken will examine the market reaction to a switch to a Nomad who has the most clients and a switch to a Nomad who represents the largest clients, with a positive reaction expected for both. The two proxies for large Nomads are represented in the following hypothesis:

H10: A switch up to a 'Large Nomad' will experience abnormal returns = 0.

H1: A switch up to a 'Large Nomad' will experience abnormal returns > 0.

### **5.2.3 Strict vs. Lenient Nomads**

Another motivation behind auditor switching concerns management opinion shopping. For instance, a company might shop around for an auditor more willing to allow certain accounting practices that would show the company in a more favourable light, especially where the previous auditor has issued a qualified opinion (DeFond and Subramanyam, 1998). This is supported by Davidson III (2006), who finds evidence that companies who receive a modified opinion are more likely to choose a non-Big-Six auditor in order to receive an unqualified opinion from a lower quality auditor. However, Chow and Rice (1982) and Smith (1986) dispute this, as neither find any evidence of a change in auditor opinion after the switch was made. Krishnan and Stephens (1995) also report that there is no difference between the leniency of auditors

before and after a switch, while Johnson and Lys (1990), who investigate management opportunism theories, find no evidence that this is the case in practice. Furthermore, Lu (2006) concludes that there are no benefits to opinion shopping due to the negative market reaction that is experienced when a switch is announced.

However, Lennox (2000) finds that although the audit opinion after opinion shopping does not always get better, the report they would have been given had they not made the switch would have been worse. Further supporting the opinion-shopping proposition is the Chan et al (2006) paper which analyses auditor switches between local (small) auditors and non-local (large) auditors in China. They find that changes to a local auditor occurred when the incumbent auditor issued a qualified opinion and these companies then received a clean report by the local auditor suggesting the successful utilisation of opinion shopping. This indicates that companies can participate in effective opinion shopping.

There is clearly some doubt over the extent to which auditor opinion shopping actually takes place in the market for auditors. Despite this, opinion shopping may still be valid with regard to Nomads. A company expecting a qualified audit opinion might switch to a less reputable auditor to get a more favourable opinion. Similarly, an AIM company that is struggling to comply with all the AIM rules to the standards of their appointed Nomad may consider changing to a less reputable Nomad to release the regulatory burden. From a Nomad perspective, a Nomad who is seeking more clients may be equally motivated to engage in a company that is not able to fully comply with the AIM Rules.

Therefore, in the second and third hypothesis it will be ascertained whether AIM companies will be less conservative with regards to implementing the AIM rules when they switch Nomad to look for a more lenient and flexible Nomad. AIM companies have a wide discretion as to when they publish their final results: six months compared to three on the Main Market. A strict Nomad might promote the prompt publication of their clients' financial results to make them more aligned with the disclosure quality of their Main Market competitors; while a lenient Nomad might be more inclined to allow a client to take the full six months. That is, the reporting lag will be longer for a company that changes to a more 'lenient' Nomad when compared to the shorter reporting lag of companies who switch to a 'strict' Nomad. It would be expected that the market should react positively to a stricter and better quality monitor; while discipline companies that switch down to a more lenient Nomad who does not provide the same quality of oversight. This in turn, leads to potential agency conflicts as lenient Nomads are not able to provide the same quality control of their clients despite being the principle regulator. Consequently, the hypotheses will be:

H20: A switch to a strict Nomad will earn abnormal returns = 0.

H2: A switch to a strict Nomad will earn abnormal returns > 0.

H30: A switch to a lenient Nomad will earn abnormal returns = 0.

H3: A switch to a lenient Nomad will earn abnormal returns < 0.

In order to test this hypothesis, Nomads will be ranked according to the median reporting lag. A set of 'strict' and 'lenient' Nomads will be constructed by ranking the Nomads according to the reporting lag of the companies they represent.

#### 5.2.4 Nomad Switches and Agency Theory

Agency theory (*reported in section 2.3-2.4*) extends the auditor literature to provide further support for the Nomad reputation hypothesis. One of the main agency problems arising on AIM is the large managerial discretion allowed to them through the self-regulatory environment of the market. As highlighted in chapter two, Williamson (1963) states that inadequate monitoring and control of the management allows considerable scope in the operational running of the company. This discretion can lead to managers making wealth-destroying decision that are not in the best interests of investors. Such discretionary powers can lead to managers making costly decisions that damage shareholder wealth (Stulz, 1990). One such decision could be to make an unnecessary and costly Nomad switch to an equal or lower quality Nomad (if a Nomad has the same perceived reputation, then there is no benefit in switching). However in response to this, shareholders can employ managerial discipline by deliberately depressing the stock price to reflect the cost of the negative decision being made (Flannery, 2001; Peria and Schmukler, 2001) (*detailed in section 2.10*). Given this, if a company makes a switch to a Nomad of less or equal rank, it would be expected that the market would response negatively as a form of managerial discipline.

For this part of the analysis, the aggregate Nomad reputation index will be used. This is an equally weighted average of all seven Nomad reputation variables. The fourth hypothesis is detailed below:

H40: Companies making switches to equal or lesser Nomads will earn abnormal returns = 0.

H4: Companies making switches to equal or lesser Nomads will earn abnormal returns  $<0$ .

However, not all managers will use their discretion in such a negative and value-destroying way. Given the aforementioned agency problem, managers can provide their shareholders with guarantees regarding their behaviour and ensure they don't expropriate funds by investing in value-damaging projects. Such assurances and mechanisms are bonding costs (*section 2.3.1*). These are costs that aim to reduce the agency problem. One form of bonding is through the monitoring provided by the external auditor. Fan and Wong (2005) state that companies are more likely to engage a Big-Five auditor when there are severe agency problems. In doing this, managers bond themselves to their firm by employing a larger, more expensive auditor, who is perceived to be more reputable.

As well as increased monitoring, hiring an expensive Big-Five auditor is also a bonding mechanism as the cost itself consumes the company's resources, thus ensuring they cannot be misappropriated by management (Jensen and Meckling, 1976). This is further supported by Jensen and Meckling (1976) who state that monitoring and bonding must be undertaken to limit the actions of the management and keep the principal-agent problem relationship aligned.

Therefore, the hiring of an expensive, reputable Nomad should also supply the same level of bonding as the external auditor as they are levying greater quality monitoring on managers. Given this, the final hypothesis is:

H50: Companies who switch to a reputable Nomad will earn abnormal returns  $=0$ .

H5: Companies who switch to a reputable Nomad will earn abnormal returns  $>0$ .

### **5.2.5 Dismissals and Resignations**

Although an examination into the market reaction of dismissals and resignation would be applicable and of interest for AIM companies, there have been no reported announcements of actual Nomad dismissals and only 15 observations of Nomad resignations, which is too small to allow appropriate analysis to be undertaken.

#### **Summary**

Given the comparable nature of Nomads and auditors, especially with regard to their monitoring and due diligence roles; the above literature highlights areas of study into Nomads that have not yet been carried out. First, the motive behind the various kinds of Nomad switches. Second, the effects of the changes is documented to assess whether abnormal returns are earned around the announcement of a change and whether the market reacts in different ways depending on the actual Nomad involved.

## **5.3 Data Selection**

### **5.3.1 AIM Companies**

The study will analyse all Nomad switches over a four-year period starting in April 2006<sup>4</sup>. International companies are eliminated from this study as, despite an increasing number of admissions since AIM's launch, there were still on 304 international companies listed on AIM in 2006. Moreover, these companies tend to be cross-listed on markets in their home-nation: influenced and subject to their own countries legal system, rules and governance codes. To do this, DataStream is used to generate a list of UK companies listed on the London Stock Exchange AIM.

This list, accessed on the 26<sup>th</sup> August 2011, produced a total of 1,134 live and dead firms. The portfolio was then filtered: 37 companies did not have a UK ISIN as a result of which country of origin could not be established; 115 financial firms, including investment entities, were also excluded. To avoid potential problems regarding thin trading and low liquidity (as daily stock price data is being used), 507 firms were removed where market capitalisation was less than £5m, or where there was no trading activity around the announcement date being examined. One further company was deleted for not having a year-end prior to the 1<sup>st</sup> January 2006. This leaves a final sample of 475. Of these remaining 475 firms, a further 16 companies were deleted either because data was missing from NexisUK and other sources, the firms were suspended in the year before the 2006/2007 year end, or they had been misclassified by DataStream, for example, being on the Official list rather than AIM

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<sup>4</sup> A list of all Nomads can be found in Appendix 4.1

at January 2006. Firms listing on the AIM following this date were not included so that the study used an ex-ante sample rather than an ex-post sample. The final sample comprised 459 firms.

*Table 5.1* displays the total number of observations available from the 459 companies over the four-year sample period. Therefore, this study uses a final sample of 1,836 testable observations. From here NexisUK was used to collect announcements on all Nomad switches and resignations. With regards to Nomads, according to the LSE website there are currently 60 Nomad and 140 Brokerage companies representing AIM companies. In this study, over the four-year sample period, there are a total of 72 different Nomads. At the time of collation there were 78 Nomad firms and a list of all Nomads can be found in Appendix 1. From the data collection, there were a total of 563 Nomad switches, after removing cancelled companies and those who had announcements around the event window. Finally, there are 258 firms with more than one switch and 137 firms with just a single switch over the sample period. This leaves a total of 395 Nomad switches to test against.

**Table 5.1 Final Sample of AIM Companies**

	Firm Years
Initial sample (1,134 companies, 2006-2010)	4,536
Less unsuitable companies	-2,636
Less Unavailable data in NexisUK	-64
Final Sample (459 companies, 2006-2010)	1,836
Total Number of Switches	563
Switches removed due to confounding events	56
Cancelled Switches	113
Number of firms with Multiple Sample Point	258
Number of firms with Single Sample Point	137
Final testable Switches	395

## **5.4 Methodology**

### **5.4.1 Research Design**

In the first instance an event study method will be used to determine if there is any market reaction to Nomad switches. This will further aide analysis to see whether certain Nomad changes are seen as more/less favourable than others, allowing them to be ranked in order of preference and indicating any presence of Nomad quality. A suitable model will be used to calculate the abnormal returns of these firms; the results will then be grouped into different event windows to capture returns before and after the date the actual switch was made.

### **5.4.2 Use of Event Study**

An event study method is appropriate for this study as, by design, it investigates the relationship between share prices and economic events (Strong, 1992). There are various ways to calculate abnormal returns but as this study uses daily returns data there can be potential problems. Daily returns are less likely to be normally distributed than monthly returns; market model parameter estimation can be more biased with daily prices and variance estimation around announcements (Brown and Warner, 1985). These issues will affect the power and accuracy of the findings from the model used. One method for calculating normal returns is the Fama French three-factor model. Extant literature has found that stocks expected returns are positively related to their market-to-book and inversely to size. Given this, models such as the market model will be biased as they only take into consideration one factor, the market beta (Fama and French, 2004; Subramanian et al, 2006). However, UK evidence suggests

that this method fails to explain much of the cross section of returns when using UK data. In a study by Gregory et al (2009), Fama-French and momentum factors are generated with the intention of becoming publically available for use and are comparable to the data issued by Kenneth French's US website. The study also supports the earlier findings of Michou et al (2007) by concluding that such factor models are unable to adequately describe risk in UK data. These findings are further substantiated by the more recent study by Gregory et al (2013) which tests the Fama-French models further and still finds evidence that these factor models do not appropriately explain the cross section of returns when using UK data.

Another applicable event study method considered is the market model. Brown and Warner's (1985) analysis of daily stock returns found that the Market Adjusted Returns Model overcomes problems surrounding variance estimation around announcement and bias in the parameter estimation and the OLS market model. This is corroborated by the findings in Dyckman et al (1984), which also favours the market model, as the study concludes that daily returns are not affected by non-normality of the data. Given the above evidence, the first method used in this study will be the OLS market model as it is more suitable when controlling for daily returns and UK data. However, an extension of the Fama-French three-factor model will also be undertaken to test firm-specific characteristics not covered by the market model.

A further issue to take into considerations when using event studies is that of confounding events. The longer the window, the more likely it becomes that other events will affect the stock price and cloud the results of an event study. The shorter the window, the less likely it is that confounding events will occur. A study by Brown

and Warner (1985) has been used to justify the use of longer windows. However, Brown and Warner demonstrate that their justification is appropriate only if confounding events are truly random, which is plausible if and only if the sample size is large. As event studies are designed to isolate the financial impact of a particular event. When the event window is long, more than three trading days, the method can easily generate spurious results. This study uses the following event windows (-20, +7) (-20, -3) (-1, +1) (0, 0) (-1, 0), 0 being the day of the actual nomad switch. Therefore, given what we have ascertained about confounding events, the main focus is in the three event windows immediately surrounding the announcement day. Pre and post announcement windows provide useful information about the liquidity of the firms used in the sample and the length of time the market takes to respond to announcements. However, caution should be taken as significant abnormal returns in longer windows could pertain to a different event/announcement.

The returns for each of the companies are gathered from DataStream to allow comparison of the companies who make Nomad switches. The abnormal returns of the companies are calculated using the OLS Model regression to see whether the results are statistically significant. The regression uses excess returns and is calculated using the following model:

$$AR_{it} = R_{it} - [\alpha + \beta_i R_{mt}] \quad (5.1)$$

Where:

- $AR_{it}$  = Abnormal returns of the company i at time t.
- $R_{it}$  = Returns of the company i at time t

$R_{mt}$  = Market returns using FTSE Allshare index  
 $\alpha$  and  $\beta$  = OLS parameters

The returns of the company are calculated as  $R_{it} = \ln(P_{it} / P_{it-1})$  and the market returns as  $R_{mt} = \ln(I_t / I_{t-1})$ . Where,  $\ln$  is the natural logarithm,  $P_{it}$  is the price of the firm at time  $t$  and  $P_{it-1}$  is the price one day before time  $t$ . Similarly,  $I_t$  is the price of the index at time  $t$  and  $I_{t-1}$  is the price of the index one day before time  $t$ .  $\alpha$  and  $\beta$  are estimated using Ordinary Least Squares (OLS) over an estimation period before the event period. The estimation period is 100 days, which is the period advised for daily return studies in Armitage (1995).  $\alpha$  is the excess return on the stock and  $\beta$  is the coefficient of firm return on the market return. The risk free rate of return is deducted from  $R_{it}$  and  $R_{mt}$ . The risk free rate is established by calculating the returns of UK T-bills and converting the annual figure into daily trading risk by assuming 250 trading days per year. The FTSE 100 volume is downloaded and compared to the dates in the returns and any non-trading days are discarded (weekends/public holidays).

To control for thin trading, the  $\beta$  is adjusted using the Scholes and Williams (1977) method. Strong (1992) states that OLS estimates of the market model parameters are biased and inconsistent, resulting in biased estimates of abnormal returns leading to mis-specified test statistics. To take on account this problem, Scholes and Williams (1977) provide a method to remove a greater deal of bias from beta. The method requires the running three regressions to obtain the lag, match and lead betas as follows:

$$\beta_{SW} = \frac{(\beta_{-1} + \beta_0 + \beta_{+1})}{(1 + 2\rho_1)} \quad (5.2)$$

Where,  $\beta_{-1} + \beta_0 + \beta_{+1}$  are the lag, match and lead security betas, respectively.  $\rho_1$  is the first-order autocorrelation coefficient of the market index:

$$\rho_{mt} = \frac{\sigma(r_{mt+1}, r_{mt})}{\sigma(r_{mt+1})\sigma(r_{mt})} \quad (5.3)$$

Where,  $\sigma(r_{mt+1}, r_{mt})$  is the covariance estimate, and  $\sigma(r_{mt})$  is the standard deviation of returns for day t.

The average abnormal returns for the whole sample are then generated over the different event windows with the maximum event period (-20, +7) days over the announcement period. This is then cumulated to capture the full effect of the announcement and allows comparison with the period leading up to the actual event (Strong, 1992). This is carried out using the following equation to work out the cumulated average abnormal returns:

$$CAR_{it} = \sum_{i=1}^T AR_{it} \quad (5.4)$$

Where  $CAR_{it}$  is cumulated average abnormal returns and  $AR_{it}$  is the average abnormal returns already calculated for the set of companies. The CAR is calculated over the different event windows. The mean abnormal return, AR, is then calculated at each event date which can then be cumulated to find the CAR for different event windows to allow comparisons between the different nomad firms.

## Robustness Checks: Rank Test

Ahern (2009) states the power of the t-test to detect abnormal performance is the lowest of all the test statistics, on average, and displays considerable bias. Corrado (1989), Corrado and Zivney (1992), and Campbell and Wasley (1993) all document that the non-parametric rank and sign tests outperform the t-test, both in terms of power and specification. Seth Armitage (1995) confirms that the Corrado rank test has been proven to be superior to other alternatives in event study methodology and will be used as a robustness check in this study. Estimation and event period errors are ranked for each share and the average rank of all errors is subtracted from the rank of the event day error. Therefore, positive abnormal returns on the event day is reflected in a higher than average rank for that day's error, producing a positive average difference across all shares for that day. The test statistic is calculated by dividing this average difference by the standard deviation of average differences over the estimation and event periods. The first step is to transform each firm's abnormal returns in ranks ( $K_i$ ) over the combined period that includes the estimation and the event window ( $T_i$ ):

$$K_{it} = \text{rank}(AR_{it}) \quad (5.5)$$

$$AR_{it} > AR_{is} \rightarrow K_{it} > K_{is} \quad (5.6)$$

The test then compares the ranks in the event period for each firm, with the expected average rank under the null hypothesis of no abnormal returns ( $K_i = 0.5 + T\sqrt{2}$ ). The test statistic for the null hypothesis is:

$$T = \frac{\frac{1}{N} \sum_{i=1}^N (K_{it0} - \bar{K}_i)}{S(\bar{K})} \quad (5.7)$$

Where,

$$s(\bar{K}) = \sqrt{\frac{1}{N} \sum_{t=1}^T \frac{1}{N^2} \sum_{i=1}^N (K_{it} - \bar{K}_i)^2} \quad (5.8)$$

In addition, the t-test for the CAR is:

$$T_{CAR} = \frac{\frac{1}{N}}{\sqrt{(T_2 - T_1 + 1)}} \sum_{i=1}^N \sum_{T_1}^{T_2} \frac{K_{it} - ((T+1)/2)}{S(\bar{K})} \quad (5.9)$$

### **Robustness Checks: Standardisation**

Armitage's (1995) study into the various event study methodologies finds that performance of the OLS market model is enhanced when the abnormal returns are standardised by the regression's standard errors. Standardising is also a means of normalising residuals that may otherwise be non-normally distributed (Patell, 1976). Furthermore, Peterson (1989) also states that standardisation is necessary in order to reflect any statistical error in the calculation of the predicted returns.

This study will use the methodology and notation presented by Armitage (1995). Standardised errors ( $SE_{it}$ ) are calculated by dividing each share's abnormal error ( $e_{it}$ ) by the estimation period standard error of regression ( $s_i$ ), which generates the standard error from which t-tests can be carried out. According to Armitage (1995), the standardised errors result in greater comparability with regard to significance: if a share is more volatile, the normal return has to be higher in order to reach a certain level of significance. The standardised test statistic is reported alongside the non-parametric Corrado (1989), Corrado and Zivney (1992) rank test.

Standardised Error ( $SE_{it}$ ):

$$SE_{it} = e_{it}/s_i \quad (5.10)$$

where:

$$s_i = ([1/T - 2] \sum_{t_1}^T e_{it}^2) \quad (5.11)$$

$e_{it}$  represents each company's daily residuals.  $T$  represents the number of daily observations in the estimation period. In order to test whether there has been any significant abnormal return earned, a t-test is also carried out. The test statistic is:

$$test\ statistic = \sum_{i=1}^N SE_{it}/\sqrt{N} \quad (5.12)$$

where,  $SE_{it}$  is the standard error and  $\sqrt{N}$  is the square root of the number of observations.

### **Cumulative Abnormal Return**

Kothari and Warner (2004) state that it is also necessary to analyse whether there are abnormal returns earned around the period of the event window by aggregating the residuals into different Average Cumulative Error windows ( $ACE$ ). Examining different event windows surrounding Nomad switches will first, show whether there are any abnormal returns before the announcement is made which might indicate that the event is anticipated. Using Armitage (1995) methodology and notation, the  $ACE$  is derived as follows:

$$ACE_D = \sum_{t_1}^{t_2} AE_t \quad (5.13)$$

Where,  $ACE_D$  is the average cumulative errors,  $AE_t$  is the average error at time  $t$ , and  $D$  is the number of event days in the event window. In the previous analysis,  $ACE_D$  is referred to as Cumulative Abnormal Returns (CAR), and this will be how it's

referred to in this study. The test statistic for  $ACE_D$  is the sum of the daily test statistics over the event window divided by  $\sqrt{D}$ .

### **Additional Analysis: Multiple Regression**

A multiple regression analysis will be carried out under different conditions (i.e. Switch-ups/lateral) taking into account different company characteristics as thus far, only the characteristics of the Nomads have been considered. The characteristics of AIM companies tend to be different than those on the Main Market. For instance, given that the AIM markets itself as an international market for smaller growing companies, listed companies therefore tend to be smaller, thinly traded, and still in their growth phase. Hence, in order to take these company characteristics into consideration, a model that extends the Fama-French three-factor model is used. The model controls for AIM company characteristics over a sample period of 250 trading days before and after the switch is made. This should, therefore, be a robust version of the Fama-French three-factor model given that it extends and controls for additional variables and company characteristics such as omitted variable bias and thin trading.

$$r_t = \alpha + \beta_1 R_{mt} + \beta_2 R_{mt-1} + \beta_3 SMB_t + \beta_4 SMB_{t-1} + \beta_5 VMG_t + \beta_6 VMG_{t-1} + \beta_7 VOL_t + \beta_8 VOL_{t-1} + \beta_9 ED_{-1} + \beta_{10} ED_0 + \beta_{11} ED_{+1} + \beta_{12} R_{t-1} + e_t \quad (5.14)$$

The above regression model will estimate the least squares coefficients and control for company size and firm style by using Fama-French factors found in their three-factor model. The SMB (small minus big) is obtained by measuring the geometric difference between the FTSE UK Small Cap Style Index and the FTSE UK Large Cap Style Index. SMB is designed to determine the additional return investors receive by

investing in firms with relatively small market capitalisations. A negative SMB indicates that large companies outperformed the small companies and vice versa. Similarly, the VMG (value minus growth) factor is measured by calculating the difference between the FTSE UK Growth Style Index and the FTSE UK Value Style Index. VMG computes the ‘value premium’ provided to investors for investing in companies with high book-to-market values over those with low book-to-market values. A positive VMG in a month indicates that value stocks outperformed growth stocks in that month. A negative VMG in a given month indicates the growth stocks outperformed.

There are also event day dummies,  $ED_{-1}$ ,  $ED_0$ ,  $ED_{+1}$ , which controls for the presence of clustering, where there is an announcement made on the same day by multiple firms (MacKinlay, 1997). The event dummies capture abnormal earned the day before, the day of, and day after the switch is made.  $VOL_t$  represents the trading volume of the AIM companies, which will indicate market interest in these companies and whether higher volume might explain any returns earned. The returns of the company are calculated as  $R_t = \ln(P_t / P_{t-1})$  and the market returns as

$R_{mt} = \ln(I_t / I_{t-1})$ .  $R_{mt}$  is the market return using the FTSE Allshare index. Finally,  $\alpha$  is the intercept (firm’s daily abnormal return), and  $e_t$  is the error term.

One of the main issues when analysing stock returns on the AIM market is thin trading as AIM companies are small and tightly held which results in low volume of trading for these companies and can lead to bias in the returns earned. Therefore, to mitigate this problem, all the coefficients in the model are lagged in order to moderate the thin trading bias as in the Dimson (1979) paper.

*Table 5.2* displays the cross-sectional sample means of the coefficients for the independent variables described in *equation 5.9* over aggregate top-15 switch-ups, top-5 switch-ups and lateral switches. The intercept is negative and significant (at 1% level) for all three types of switches; indicating that the companies in this study all underperform the benchmark after controlling for the all factors. However, the test statistic is more negative for the Top-15 Nomads and the lateral Nomad switches suggesting that companies that switch up to a more reputable Nomad are underperforming those companies that make unnecessary Nomad switches. VOL is significantly positive at the event day but significantly negative in its corresponding lag. This indicates a significant increase in trading on all types of switches at the time of the announcement. Market excess returns and its lag are also significantly positive across all windows. VMG is significantly positive for the switch-ups measures suggesting value companies are outperforming at the time of the switches. Conversely, the VMG is significantly negative at the time of the lateral or downward switch. SMB and the corresponding lag are significantly positive for all types of switches. Finally, the event day dummies and the lagged returns do not produce significant results.

For the data analysis in the next section, the CARs will be documented alongside the t-test, standardised t-test and the Corrado (1989), Corrado and Zivney (1992) rank test.

**Table 5.2 Sample Means of Least Squares Coefficients for Model 2**

Independent Variables	Aggregate top-15 Switch-ups	Aggregate top-5 Switch-Ups	Aggregate Lateral switches
	<i>Mean Coefficients and t-stats. n=127</i>	<i>Mean Coefficients and t-stats. n=49</i>	<i>Mean Coefficients and t-stats. n=89</i>
vol-1	-1.7098 (-5.89)***	-0.9557 (-3.63)***	-1.1838 (-3.79)***
vol	5.3993 (13.75)***	4.3957 (11.92)***	5.0326 (11.94)***
MRK -1	0.1672 (13.53)***	0.1588 (7.42)***	0.2332 (14.118)**
MRK	0.7616 (21.06)***	0.7987 (14.16)***	0.3322 (18.49)***
VMG -1	-0.1666 (-3.09)***	-0.2146 (-2.35)**	0.1594 (5.03)***
VMG	0.2388 (5.62)***	0.2577 (3.72)***	-0.0444 (-2.29)**
SMB -1	0.1036 (4.80)***	0.1115 (2.96)***	0.3783 (17.69)***
SMB	1.0748 (14.86)***	1.1375 (10.09)***	0.1846 (5.20)***
ED +1	-0.0022 (-0.56)	-0.0064 (-0.94)	-0.0026 (-0.78)
ED -1	0.0050 (0.92)	0.0069 (0.92)	0.0029 (0.63)
ED 0	-0.0045 (-0.0038)	-0.0073 (-1.53)	-0.0018 (-0.25)
Return -1	0.0040 (0.78)	0.0064 (0.75)	0.0479 (7.82)***
intercept	-1.29 -22.91***	-0.0038 -13.88***	-0.0019 -12.57***

The table displays the independent variables, sample means of least squares coefficients and test statistics explaining the dependent variable (abnormal returns) for aggregate: switch-ups, top-5 switch-ups and lateral switches. Means are winsorised at 1% to remove spurious outliers. The abbreviations are as follows: Volume (VOL), bid-ask spread (BAS), value minus growth (VMG), small minus big (SMB), and event day abnormal return (ED). The symbols \*\*\*, \*\*, \*, denotes significance at the  $p < 0.01$ , 0.05 and 0.10 levels respectively for the t-statistics in parenthesis.

## 5.5 Descriptive Statistics

With the abnormal returns calculated it is now necessary to start testing the hypotheses.  $H_1$  states that Nomad reputation may be a key determinant of Nomad switching. This hypothesis specifically uses Nomad size as a proxy based on the auditor switching literature. However, this study will extend this measurement of reputation by building up a Nomad reputation index of seven different measurements of reputation and ranking the Nomads accordingly within each of the seven indices, as well as an aggregate equally weighted measurement of all seven factors, to produce an overall Nomad reputation ranking system. In their study of IPO survival in the AIM market, Espenlaub et al (2012) construct an index of five variables representing Nomad reputation in order to test whether Nomad reputation increases the survival rates of companies listing on AIM. The study finds that Nomad reputation is a significant factor in company survival when a top-five Nomad represents the company at IPO.

## 5.2 General Descriptive Statistics

*Table 5.3* illustrates the frequency of Nomad changes over each industry sector for the four-year sample period. This highlights the presence of any relationship between the number of announcements and the industry group in which they were made. The table indicates that the consumer services (CNSMS) sector and the industrial sector (INDUS) produced the highest number of switches. On the other end of the spectrum, the telecommunications (TELCM) sector has the lowest number of switches at seven, although there are only eight companies in this sector. Given that the total number of changes is 564 and the number of companies in the sample is 459, there are some companies who make more than one switch over the 4-year sample period. The table

also indicates that the number of announcements made may correspond to the number of companies in each sector as the more announcements made, the greater the number of companies in each sector.

In addition to the industry sector, other characteristics, such as the year in which the announcements are made, are explored. *Panel B* provides more descriptive statistics on the relationship between the announcements of Nomad changes, the year in which they were made, and whether they were made by live or cancelled companies. The table shows a general decrease in the number of changes made over the sample period as the 06/07-year had the highest number of switches at 152. However, the 08/09 financial year shows a slight increase in the number of switches. The fall in observations from 06/07 to 07/08 may be due to the introduction of the compulsory adoption of the IFRS, as companies could be in greater need of maintaining their Nomad while they prepare their company for the change in accounting standards.

Overall, the table does not support a relationship between the number of switches and the year in which they were made. However, the table does demonstrate that more live companies make switches than cancelled companies (where live companies are the companies that are still trading at the end of the sample period, and cancelled/dead companies are those that stop trading in the last year of the four-year period), indicating that Nomad switches may not be an indication of bad news as suggested in the third hypothesis. Furthermore, *Panel B* shows the number of resignations made in each year. There are a total of 18 resignations over the sample period and a great proportion of these were made in the 09/10 financial year. Despite no resignations in

the 07/08 periods, there is a general increase in the number of resignation made over the entire period.

**Table 5.3 Frequency of Notifications and Industry Sectors**

Panel A: Number of switches made over each industry group.								
Industry	No. Of Companies		% of total		No. Of Switches			
BMAT	59		12.42%		76 (16.56%)			
CNSMG	38		8.06%		38 (8.28%)			
CNSMS	78		17.21%		107 (23.31%)			
HLTHC	43		9.37%		60 (13.07%)			
INDUS	108		23.53%		116 (25.27%)			
OILGS	48		10.46%		61 (13.29%)			
TECNO	71		15.47%		88 (19.17%)			
TELCM	8		1.74%		7 (1.53%)			
UTILS	8		1.74%		11 (2.40%)			
<b>Total:</b>	<b>459</b>				<b>564 (100%)</b>			

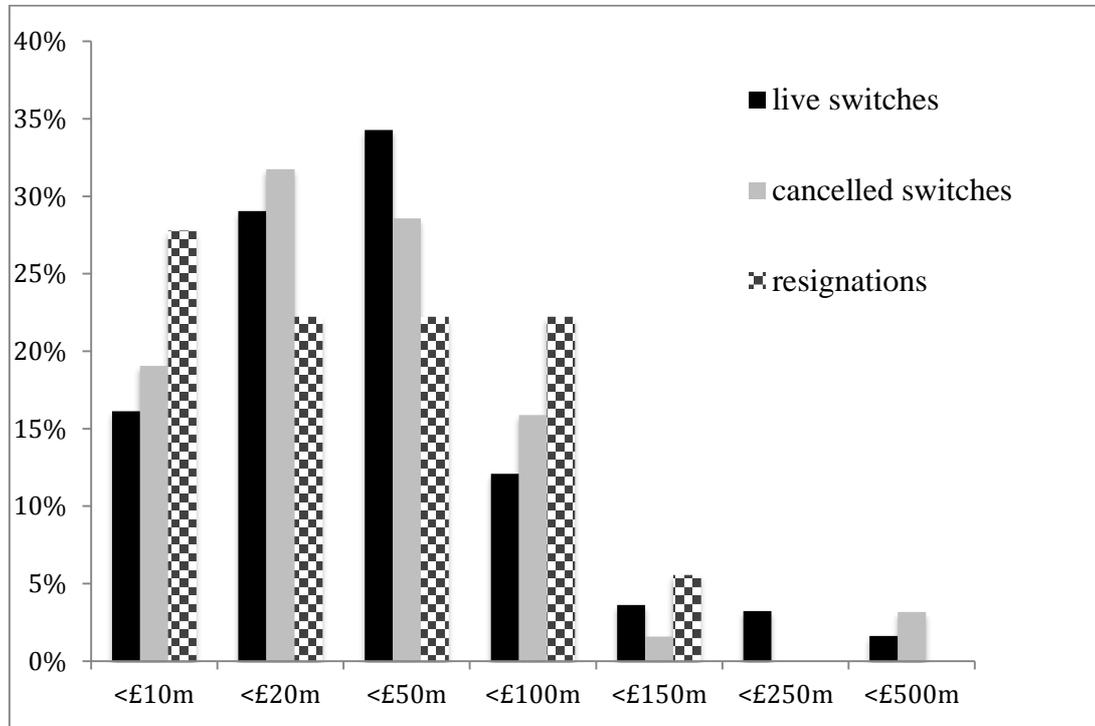
Panel B: Frequency of switches made per year								
Year	06/07		07/08		08/09		09/10	
	Cancelled	Live	Cancelled	Live	Cancelled	Live	Cancelled	Live
Switching Companies	24	104	28	83	28	97	21	93
Non-switching	75	331	71	348	71	334	78	345
No. of Resignations	1	1	0	0	1	3	9	3
<b>Total</b>	<b>100</b>	<b>436</b>	<b>99</b>	<b>431</b>	<b>100</b>	<b>434</b>	<b>108</b>	<b>441</b>

The table shows the distribution of Nomad switches of the different industry sectors in Panel A. Panel B shows the distribution of switches over each of the 4-year sample period while also stating whether the companies who made the switches are still trading after the four years (live) of switches made by companies that were subsequently cancelled in the last year of the sample period.

It is also necessary to report the distribution of Nomad switches based on firm characteristics. *Figure 5.1* displays the number of Nomad switches over different size categories. It shows that live companies have the highest market cap and that most live switches occur when companies have a market cap of around £50m. Most dead companies that make Nomad switches (prior to cancellation) tend to be smaller companies with a market cap of <£20m. The figure also illustrates the size of companies that announce resignations and highlight that they are smaller, around the <£10m point. There are also no resignations for companies with a market cap above £100m. The overall trend also indicates that large companies in all categories make fewer Nomad switches than smaller companies suggesting that small companies may have more to gain from changing their Nomads, e.g. because of lower fees. Therefore,

there might be a relationship with firm size and whether switching companies are eventually cancelled or not.

**Figure 5.1 Distribution of Size among Switching Companies**



The figure illustrates the distribution of company size for live, and cancelled companies and companies who announce Nomad resignations. Where live switches are companies that are still trading at the end of the four years and cancelled companies being those that are cancelled in the last year of the sample period but make Nomad switches in the three years they are still active.

## 5.6 Results

### 5.6.1 Aggregate Results for the Top-15 Nomads from Event Study

Before discussion of the analysis, it is worth noting the different quintiles the ranks are organised into (Q1-Q5). Q1 is the top-15 Nomads and Q5 is the lowest for both the aggregate and disaggregated indices. As most of the total switches took place in this first quintile, this is where the focus of analysis is based. Therefore, in analysis of the top switch-ups and lateral switches; lateral switches correspond to the lateral switches and switch-downs made in Q1. In the section for the combined quintiles (Q2-Q5) the switch-up are any switches to a more reputable Nomad in these for quartiles. Similarly a switch-down is to any switch made to a Lower ranked Nomad. Combining these quintiles was necessary as there were not enough observations for individual quintile analysis.

The first set of analyses undertaken examines the abnormal returns earned when switches are made to Nomads ranked in the top-15 (quintile 1) of the aggregate Nomad ranking system, and are presented in *Table 5.4* (using *equation 1*). These switches are the total switch-ups, the top-5 switch-ups and the top-15 lateral switches of the aggregate equally weighted Nomad ranking. *Panel A* reports the top-15 switch-ups over the event windows. The results show that the pre-announcement window (-20, -3) is significantly negative at the 5% level indicating these companies were underperforming prior to the Nomad switch-up. This is supported by the standardised t-test but not the rank test. The other event windows are not statistically significant. Espenlaub et al (2012) studied the reputation of the top-5 Nomads and included the

top-10 for robustness. They found that the evidence was stronger for the top-5, suggesting that nomad reputation is concentrated to the top-5 Nomads. Given this, the top-5 Nomads in the ranking are also considered to see whether the results are stronger for the more concentrated reputable Nomads. The results show that the announcement window (0,0) is significantly positive at the 5% level and indicates when companies switch to a top-5 Nomad the market reacts positively. This finding is further supported by the non-parametric rank test.

*Panel C* displays the abnormal returns earned when a company changes from a top-15 Nomad to another top-15 Nomad i.e. they make a lateral switch. The table shows that only the (-7, +7) event window is statistically significant as, 3.82% CAR is earned and this is significant at the 10% level for the t-test and at the 1% level for the rank test. Given that the pre-announcement window is negative these results indicate that the abnormal returns earned in the (-7, +7) window are a delayed reaction to the change in Nomad. Overall, the results from the aggregate top-15 changes suggest that a switch-up in the combined Nomad Reputation Index is a sign of good news and this is more pronounced for the concentrated top-5 where the event window is positive and statistically significant. This confirms the first hypothesis that a switch up to a more reputable Nomad will earn positive abnormal returns in the market.

**Table 5.4 Aggregate Results**

	CAR	TSTAT	St-test	Rank	AR	TSTAT
Panel A: Total Switch-Ups n=127						
(0,0)	0.30%	0.98	0.36	-0.84	0.30%	0.98
(-1,0)	0.12%	0.28	0.57	-0.12	0.10%	0.32
(-1,+1)	0.02%	0.04	0.69	0.14	0.01%	0.02
(-20,-3)	-2.65%	-2.14**	-2.24**	-0.42	-0.17%	-0.54
(-20,+7)	-2.30%	-1.40	-1.65*	-0.48	-0.08%	-0.27
(-7,+7)	0.25%	0.21	0.73	-0.34	0.02%	0.05
Panel B: Top-5 Switch-ups n= 49						
(0,0)	0.86%	1.99**	0.49	1.69**	0.86%	2.05
(-1,0)	0.83%	1.38	0.71	0.24	0.27%	0.65
(-1,+1)	0.51%	0.69	0.67	-0.28	0.18%	0.43
(-20,-3)	0.38%	0.38	1.79*	0.64	0.02%	0.05
(-20,+7)	0.05%	0.03	2.06**	0.75	-0.01%	-0.03
(-7,+7)	0.32%	0.19	1.50	0.58	0.01%	0.03
Panel C: Total Lateral Switches n=89						
(0,0)	-0.47%	-0.75	-0.36	0.44	-0.54%	-0.89
(-1,0)	-0.61%	-0.69	-0.57	0.76	-0.37%	-0.61
(-1,+1)	-0.35%	-0.32	-0.69	0.81	0.15%	-0.24
(-20,-3)	-1.95%	-0.71	-1.65	1.30	-0.09%	-0.15
(-20,+7)	2.24%	0.68	1.24	3.23***	0.09%	0.14
(-7,+7)	3.88%	1.60*	1.73*	3.76***	0.26%	0.43

The table shows the results for switches made to Nomads ranked in the top 15 of the aggregate ranking. Panel B shows the results for the switches ranked in the top-5 and Panel C displays the abnormal returns earned for lateral switches. \* \*\* \*\*\* marks significance at the 10%, 5% and 1% level, respectively. TSTAT is the test statistic, St-test is the standardised test statistic, and Rank is the non-parametric rank test.

## **Results for Combined Aggregate in Quintiles 2-5s**

The results from the descriptive statistics highlighted a potential problem with regard to sample size. That is, in all of the seven measures of reputation in the index, there are not enough switch-down observations to allow appropriate analysis. Therefore, the switch-ups, switch-downs and the lateral switches for the other four quintiles (2-5) have been combined to allow analysis of abnormal returns earned on each event. *Table 5.5* displays the results.

*Panel A* shows the total switch-ups of the combined analysis. Only the pre-announcement window produces statistically significant returns, which are positive. However, the other event windows in this analysis are not significant. Possible rationales for the pre-announcement window being significantly positive prior to a switch-up might be that these companies were out-performing the market and could therefore afford to hire a more reputable Nomad. This also provides support for the fifth hypothesis that switch-ups are associated with positive abnormal returns as managers are willing to make a costly switch to a reputable as a bonding mechanism. The additional monitoring as well as the reduced amount of funding the managers now have to expropriate, results in a positive market reaction.

*Panel B* show the results for the combined switch down, where both the post-announcement windows (-20, +7) and (-7, +7) are significantly negative. This indicates that when a switch downwards is made, the market reacts negatively to the news, which is consistent with the fourth hypothesis that companies switching to a less reputable Nomad will experience negative abnormal returns. This also supports the theory that when managers make decisions perceived to be costly/unnecessary, the

market disciplines this action by depressing the share price. For the lateral switches, shown in *Panel C*, there are no significant abnormal returns earned over any event window suggesting the market does not perceive the lateral switches to be an unnecessary expense. Overall, these results do support a directional theory proposed by Knechel et al (2007) as downward switches produce a negative reaction while a switch-up produces positive abnormal returns.

**Table 5.5 Combined results for aggregate ranking (Nomads outside top-15)**

	CAR	TSTAT	AR	TSTAT
Panel A: Switch-ups				
n=72				
(0,0)	-0.59%	-1.09	-0.59%	-1.09
(-1,0)	0.78%	-1.03	0.39%	-0.73
(-1,+1)	-1.01%	-1.08	-0.34%	-0.62
(-20,-3)	4.78%	2.04**	0.27%	0.49
(-20,+7)	4.94%	1.73*	0.18%	0.33
(-7,+7)	1.19%	0.57	1.58%	2.93
Panel B: Switch-downs				
n=78				
(0,0)	-0.32%	-0.59	-0.32%	-0.59
(-1,0)	-0.76%	-0.99	-0.38%	-0.70
(-1,+1)	-1.31%	-1.39	-0.44%	-0.80
(-20,-3)	-3.82%	-1.75	0.77%	1.42
(-20,+7)	-5.30%	-1.84*	0.53%	0.98
(-7,+7)	-4.13%	-1.96*	-0.11%	-0.20
Panel C: Lateral Switches				
n=195				
(0,0)	-0.39%	-0.51	-0.39%	-0.51
(-1,0)	-0.47%	-0.44	-0.24%	-0.31
(-1,+1)	-0.19%	-0.14	-0.06%	-0.08
(-20,-3)	3.21%	1.02	0.18%	0.23
(-20,+7)	2.19%	0.54	0.08%	0.10
<b>(-7,+7)</b>	<b>1.84%</b>	<b>0.62</b>	<b>0.12%</b>	<b>0.16</b>

The table shows the results for switches made to Nomads ranked in the rest of the ranking table by combining the switch-ups/down and lateral switches of quintile 2,3,4,5 in the aggregate ranking. Panel A shows the results for switch-ups, Panel B displays the switch-downs and Panel C display the results for the lateral switches. \* \*\* \*\*\* marks significance at the 10%, 5% and 1% level, respectively.

## Results for Individual Nomad Reputation Index

As well as the aggregate ranking, it is also necessary to assess the abnormal returns earned for each of the seven measures of Nomad reputation. *Table 5.6* displays the results. Looking at the lateral switches in *Panel C* first, only the post announcement (-7, +7) for ‘Net gainers’, ‘sustained Nomads’ and ‘MV’ are statistically significant. This suggests there is weak evidence that the market reacts positively when a switch to a Nomad with the same reputation is made. As stated by Espenlaub et al (2012), the results for the concentrated top-5 Nomads, in *Panel B*, are stronger than the top-15 as at least one window in all seven measures contains evidence of significant abnormal returns being earned. The strongest results are observed for the Sustained Nomads and the Nomad Credit Score. Both the pre and post-announcement windows is statistically significant for Sustained Nomads highlighting that a switch up to the five most reputable is seen as a sign of good news in the market. For Credit Score, the three announcement windows are significant and are so at the 1% level for the (0, 0) windows. This substantiates the previous findings from Knechel et al (2007) and Lin et al (2009) that companies hiring a Nomad with a good reputation will earn positive abnormal returns.

*Panel A* displays the abnormal returns earned for the top-15 (Q1) switch-ups. The results show that the pre-announcement window (-20, -3) is negative across all windows and statistically significant for Total Clients and Reporting Lag. The CAR turns positive following the switch-up, and significant for Sustained Nomads and Net Gainers at the 10% and 5% level, respectively. Overall, the findings in this analysis

are that companies who switch-up to a more reputable Nomad experience positive abnormal returns.

With the index disaggregated, it is possible to examine the other hypothesis with regard to Nomad size and Nomad leniency. The proxies for Nomad size are 'total clients' and 'MV'. For total switch-ups these measures both produce negative abnormal returns, which are significant at the 5% level for the pre-announcement window. This indicates that these companies were significantly underperforming prior to the Nomad change. As the change is made the abnormal returns become less negative although are not statistically significant. However, the results for the switch-ups made to Nomads ranked in the top-5 document positive abnormal returns in all windows although, only significantly so at the (-7, +7) window for both measures, there is in addition weak evidence, at 10%, of a positive reaction on the announcement date (0, 0) of a switch in the 'total clients' measure. These findings, therefore, confirm the first hypothesis (1a) that companies that switch to a large Nomad experience positive abnormal returns. However, there is no evidence supporting hypothesis 1b that companies who do not switch-up to large Nomads experience negative returns. Both proxies for Nomad size experience negative abnormal returns in the pre-event window, which then becomes positive once the change is announced. However, these findings are not statistically significant across any window.

The last column reports the results for the reporting lag variable, which is the proxy for 'strict' and 'lenient' Nomads. The results for total switch-up (to a strict Nomad) indicate that companies, once again, are underperforming before the switch. There is significance at both pre-announcement windows (-20, -3) and (-20, +7). However,

when the switch is made there is a positive reaction on the announcement date, but this reverts back to negative in the post-announcement windows. It should also be noted that these announcement and post-announcement windows are not statistically significant. *Panel B* displays the results for a switch up to a top-5 strict Nomad. The findings indicate that even though the companies perform positively in all event windows, when a switch up is made, there are significant (at 5% level) abnormal returns earned in the (-7, +7) window. This confirms the second hypothesis that a switch to a strict Nomad is associated with positive abnormal returns.

Table 5.6b in Appendix 5.1 displays the corresponding non-parametric rank test, based on Corrado (1989) and Corrado and Zivney (1992). Apart from being less significant, the results from the rank test are broadly consistent with the findings discussed above. However, the only significant result found in relation to the actual event windows immediately surrounding the Nomad switch is the Reporting Lag. There is a positive association at the, 10% level, that a switch to a stricter Nomad is associated with positive abnormal returns. The other windows experiencing significant, and positive rank test results all appear in the post announcement windows, highlighting a possible delayed reaction to the Nomad switches.

**Table 5.6 Nomad Reputation Index Results (Disaggregated)**

Event Window	SUSTAINED		NET GAINERS		NET LOSERS		TOTAL CLIENTS		MV		CREDIT SCORE		REPORTING LAG	
	CAR	TSTAT	CAR	TSTAT	CAR	TSTAT	CAR	TSTAT	CAR	TSTAT	CAR	TSTAT	CAR	TSTAT
<b>Panel A: TOTAL TOP-15 SWITCH-UPS</b>														
(0,0)	0.04%	(0.11)	-0.08%	(-0.26)	-0.39%	(-1.06)	0.03%	(0.10)	0.03%	(0.09)	0.15%	(0.37)	-0.10%	(-0.35)
(-1,0)	0.01%	(0.03)	-0.38%	(-0.85)	-0.50%	(-0.95)	-0.24%	(-0.60)	-0.20%	(-0.46)	0.17%	(0.30)	-0.43%	(-1.08)
(-1,+1)	0.05%	(0.08)	-0.46%	(-0.85)	-0.26%	(-0.40)	-0.26%	(-0.55)	-0.11%	(-0.21)	0.26%	(0.38)	-0.40%	(-0.82)
(-20,-3)	-1.50%	(-1.00)	-1.23%	(-0.98)	-0.02%	(-0.02)	-2.53%	(-2.30)**	-1.92%	(-1.55)	-1.25%	(-0.79)	-2.49%	(-2.20)**
(-20,+7)	1.18%	(0.59)	0.62%	(0.38)	-0.11%	(-0.05)	-0.90%	(-0.62)	-0.21%	(-0.13)	-0.93%	(-0.44)	-1.61%	(-1.08)
(-7,+7)	2.62%	(1.81)*	2.36%	(1.93)**	0.40%	(0.27)	1.07%	(1.00)	1.35%	(1.13)	0.12%	(0.08)	0.79%	(0.72)
<b>Panel B: TOP-5 SWITCH-UPS</b>														
(0,0)	0.36%	(0.67)	0.21%	(0.59)	0.19%	(0.35)	0.31%	(0.80)	0.31%	(0.80)	0.98%	(1.81)*	0.38%	(1.04)
(-1,0)	0.77%	(1.00)	-0.06%	(-0.13)	0.46%	(0.59)	-0.03%	(-0.05)	-0.03%	(-0.05)	0.82%	(1.08)	0.16%	(0.32)
(-1,+1)	1.23%	(1.31)	-0.19%	(-0.31)	0.63%	(0.67)	0.35%	(0.51)	0.35%	(0.51)	1.48%	(1.58)	0.24%	(0.38)
(-20,-3)	1.95%	(0.90)	-1.74%	(-1.23)	2.66%	(1.23)	-0.10%	(-0.07)	-0.10%	(-0.07)	0.37%	(0.17)	-0.26%	(-0.18)
(-20,+7)	5.96%	(2.08)**	-0.37%	(-0.20)	5.03%	(1.75)	2.31%	(1.12)	2.31%	(1.12)	3.20%	(1.12)	2.24%	(1.16)
(-7,+7)	5.41%	(2.58)**	1.26%	(0.92)	3.68%	(1.76)	3.79%	(2.51)**	3.79%	(2.51)**	3.38%	(1.61)	3.80%	(2.69)**
<b>Panel C: TOTAL LATERAL SWITCHES</b>														
(0,0)	-0.32%	(-0.58)	-0.33%	(-0.59)	-0.53%	(-0.54)	0.02%	(0.09)	-0.11%	(-0.30)	-0.67%	(-0.49)	-0.20%	(-0.58)
(-1,0)	-0.22%	(-0.37)	-0.57%	(-0.73)	-0.48%	(-0.63)	-0.15%	(-0.25)	-0.37%	(-0.35)	-0.74%	(-0.50)	-0.28%	(-0.40)
(-1,+1)	-0.01%	(-0.02)	-0.44%	(-0.44)	0.10%	(0.08)	-0.02%	(-0.07)	1.14%	(0.78)	-0.25%	(-0.24)	-0.26%	(-0.33)
(-20,-3)	-2.80%	(-1.02)	-0.87%	(-0.35)	1.07%	(0.35)	-2.19%	(-1.09)	-1.05%	(-0.69)	-2.06%	(-0.65)	-2.35%	(-1.09)
(-20,+7)	3.31%	(0.84)	2.43%	(0.91)	2.21%	(0.81)	1.40%	(0.40)	3.05%	(0.96)	0.02%	(0.05)	0.46%	(0.18)
(-7,+7)	4.28%	(2.16)**	4.67%	(2.08)*	1.57%	(0.80)	2.20%	(1.46)	4.25%	(1.82)*	1.57%	(0.54)	3.07%	(1.55)

The table displays the results for the abnormal returns earned over different event windows for each of the seven measures of Nomad reputation. Panel A displays the results for the total switch-ups made to Nomads ranked in the top-15 of the individual rankings, Panel B shows the results for the switches ranked in the top-5 and Panel C displays the abnormal returns earned for total lateral switches. \*, \*\*, \*\*\*, denotes significance at the 10%, 5% and 1% levels, respectively.

## Results from Multiple Regression Analysis (Model 2)

In addition to the market model event study, an alternative return-generating model (*equation 5.14*) is used to control for firm-specific characteristics not covered by the market model. As before, the results for the aggregated Nomad reputation ranking are presented alongside the results from the seven individual variables that the ranking system comprises. As with the previous analysis, additional non-parametric test statistics are reported. These tests are the standardised t-test and the Corrado (1989) rank test. These provide further robustness as it does not follow the assumption that the data is normally distributed. *Table 5.7* displays the results for the abnormal returns earned around different event windows for Nomad switches ranked in the top-15 and the top-5 of the aggregated Nomad ranking.

The results from the aggregate top-15 switches show that significant negative abnormal returns are earned in the pre-announcement window, while the announcement windows, apart from (0,0) are all significantly positive. These results indicate that a switch-up is perceived as good news in the market and supports the first hypothesis that companies switching to a reputable Nomad will experience positive abnormal returns as found for auditing in the auditing literature of Dopuch and Simunic (1982) and Knechel et al (2007). However, although the findings in this analysis are supported by the standardised t-test, the rank test is not significant for any window.

As expected, there are no abnormal returns earned when a lateral switch is made, as the switch is not perceived as a positive or negative signal. In contrast to the market

model, which reported that switches to Nomads ranked in the top-5 experienced greater positive returns due to concentration in the Nomad ranking, there are no abnormal returns earned apart from in the switch-up (0, +20) window. Although this event window may indicate some delayed positive reaction to a switch-up, the results are weak as the other event windows are not significant. The findings in this table also provide evidence supporting the seven individual factors in the index as the statistically significant event windows are all strongly significant and therefore, endorse the use of the factors as well as the use of the aggregated index.

**Table 5.7 Aggregate Results for Top-15 and Top-5 Nomads**

AGGREGATE TOP-15								
	SWITCH-UPS				LATERAL SWITCHES			
	CAR	T-STAT	St-test	Rank	CAR	T-STAT	St-test	Rank
<b>(-20, -3)</b>	-5.17	-3.40***	-2.56***	-0.43	-2.75	1.41	0.36	0.49
<b>(0, 0)</b>	-0.10%	-0.07	-0.27	-1.00	0.28	0.55	0.41	-0.25
<b>(-1, 0)</b>	0.62%	1.14	3.25***	1.53	0.11	0.15	-0.21	-0.04
<b>(-1, +1)</b>	0.13%	0.19	2.46***	1.46	0.69	0.82	0.12	-0.09
<b>(-7, +7)</b>	-4.01%	-0.99	0.19	-0.49	-2.90	-1.12	-0.27	-0.20
<b>(-20, +7)</b>	-0.50%	-0.34	-1.57*	-0.35	-2.68	-1.42*	0.14	-0.06

AGGREGATE TOP-5								
	SWITCH-UPS				LATERAL SWITCHES			
	CAR	T-STAT	St-test	Rank	CAR	T-STAT	St-test	Rank
<b>(-20, -3)</b>	-4.73%	-0.95	-1.08	-0.48	-2.92%	-0.60	-1.10	0.41
<b>(0, 0)</b>	-0.51%	-0.41	-0.45	-0.84	0.42%	0.39	0.48	0.38
<b>(-1, 0)</b>	-0.96%	-0.54	-1.44	-0.15	0.84%	0.49	0.11	0.23
<b>(-1, +1)</b>	-0.58%	-0.27	-1.59	0.18	0.01%	0.00	0.29	0.00
<b>(-7, +7)</b>	-3.92%	-0.59	-0.24	-0.54	4.11%	0.63	0.33	0.43
<b>(-20, +7)</b>	-0.20%	-0.04	-0.92	-0.37	-2.24%	-0.69	-0.46	-0.48

The table displays the results for the abnormal returns earned over different event windows for the aggregate ranking of the Nomad Reputation Index for Nomads ranked in the top-15 and the top-5. \*, \*\*, \*\*\*, denotes significance at the 10%, 5% and 1% levels, respectively. TSTAT is the test statistic, St-test is the standardised test statistic, and Rank is the non-parametric rank test.

*Table 5.8* displays the results for the seven individual variables in the reputation index for Nomads ranked in the top-15 and top-5 as well as the lateral switches made. The findings are largely consistent with the findings in the aggregate regression. *Panel A* displays the results from the switch-up made to Nomads ranked in the top-15. The pre-announcement window (-20, -3) is negative in all seven categories and is significantly negative in four. The three strongest categories are *sustained Nomads market value* and *number of clients*. These categories experience significantly positive abnormal returns in the post-announcement windows further indicating that a change to a more reputable Nomad is a signal of good news. The two strongest categories also indicate that Nomad size is the most important component of Nomad reputation which supports the first hypothesis (1a) and confirms the auditing literature of Knechel et al (2007) that companies switching up to a big-four auditor experienced positive abnormal returns.

The category, Reporting Lag, is also used as a proxy for ‘opinion shopping’ as reported in the second hypothesis. DeFond and Subramanyam (1998) state that a company might shop around for a more lenient auditor who will be more willing to issue a clean audit report. A similar situation might exist between Nomad switches. Companies might want to shop around to see whether they can appoint a more lenient Nomad who might overlook the strict implementation of the AIM rules. This study uses the reporting lag as a proxy for Nomad leniency. Nomads ranked in the top-15 of *Table 5.8* are the Nomads who are the strictest and therefore will be rigorous in making sure the companies they represent announce their final results on a timely basis. The hypothesis asserts that when a switch-up to a strict nomad is made, positive abnormal

returns will be earned. The results show that the two longest preannouncement windows, (-20, +7) and (-20, -3) are both significantly negative at 5% indicating that these companies were underperforming before the switch to a strict Nomad. Consistent with the second hypothesis, both the announcement windows (0) and (0, +1) earn positive abnormal returns at the 10% and 5% level. The findings support the theory that the market reacts positively to the employment of stricter Nomad companies as they earned positive abnormal returns on the announcement window.

*Panels B* repeats the above analysis for Nomad's ranked in the top-5 to assess whether the concentration of Nomad reputation is found in the robust analysis. The findings show that the sign (+/-) are the same as the Top-15, but there is not the same level of significance observed. For instance, Net Gainers is the only significant observation in the pre-announcement window for switch-ups, whereas there were five before. However, there is still strong evidence to support the first hypothesis that Large Nomads are associated with positive abnormal returns as the event day windows, (0, +1) are significantly positive. There is also no evidence to support the second hypothesis relating to strict Nomads, as these event windows do not produce any significant results after the switch is made. Although the pre-event window (-20, +7) both provide significant evidence (at 10% level) that companies switching to a strict Nomad were underperforming in the period preceding the switch.

The results, in *Panel C*, for the lateral move made in the top-15 switches are, as expected, weaker than the switch-ups; with only *Net Gainers and Reporting Lag* providing any statistical significance (at 10% level). These results do show however that the results over the event window and (0) are all negative and significantly so in

six out of the seven categories. This indicates that the market reacts negatively to side-ways switches. This may be due to the Nomads already being ranked in the top category for reputation and, therefore, the absence of any perceived benefits to switching to another Nomad of equal ranking. Investors might even perceive such lateral switches as a superfluous and costly initiative as they will not be receiving better quality product given the Nomad is of equal ranking. These findings are consistent with the fourth hypothesis that lateral switches are associated with negative returns and that when managers use their discretion to make costly and unnecessary changes, the market disciplines them by depressing the stock price.

*Appendix 5.2* displays the robustness checks for the disaggregated results. The results support the findings above with less significance found across most windows under the rank test. However, all pre-announcement windows are negative. *Market Value and Sustained Nomads* also report positive abnormal return in the event and (-7, +7) event windows for a switch up to a top-15 Nomad. This supports the hypothesis that Nomad size and reputation are important components in the choice of Nomad.

**Table 5.8 Disaggregated Results from Multiple Regression**

EVENT WINDOW	SUSTAINED		NET GAINERS		NET LOSERS		TOTAL CLIENTS	
	CAR	TSTAT	CAR	TSTAT	CAR	TSTAT	CAR	TSTAT
<b>Panel A: TOP-15 SWITCH-UPS</b>								
(-20,-3)	-2.27%	(-1.01)	-2.08%	(-2.04)*	-1.74%	(-0.64)	-4.04%	(-2.45)**
(0,0)	-0.37%	(1.69)*	1.67%	(0.57)	-1.71%	(-0.20)	3.63%	(1.72)*
(-1,0)	-0.70%	(2.54)**	2.85%	(1.87)*	-2.82%	(-0.80)	1.18%	(1.63)*
(-1,+1)	-0.47%	(1.86)*	1.63%	(0.79)	-1.64%	(-0.91)	1.50%	(2.10)*
(-7,+7)	-0.48%	(1.26)	-1.82%	(-0.32)	2.21%	(0.18)	-1.47%	(-1.04)
(-20,+7)	-2.53%	(-0.44)	-2.87%	(-1.29)	-2.66%	(-0.97)	-2.02%	(-2.21)**
<b>Panel B: TOP-5 SWITCH-UPS</b>								
(-20,-3)	-1.40%	(-0.02)	-3.17%	(-1.94)*	-2.84%	(-1.34)	-2.24%	(-1.17)
(0,0)	-0.30%	(-0.02)	-0.76%	(-0.03)	-4.76%	(-0.40)	3.26%	(0.32)
(-1,0)	-1.70%	(-0.06)	1.24%	(0.04)	1.94%	(0.94)	2.82%	(1.59)
(-1,+1)	-1.45%	(-0.05)	2.37%	(1.26)	-0.01%	(0.00)	1.96%	(0.37)
(-7,+7)	-1.79%	(-1.03)	-1.74%	(-1.45)	-1.81%	(-0.23)	-2.18%	(-0.50)
(-20,+7)	-4.46%	(-0.05)	-3.81%	(-1.75)*	-1.13%	(-1.60)	-1.31%	(-1.43)
<b>Panel C: TOP-15 LATERAL SWITCHES</b>								
(-20,-3)	1.78%	(0.82)	-1.13%	(-0.54)	-1.71%	(-0.24)	-1.07%	(-0.29)
(0,0)	-0.40%	(-0.75)	-1.68%	(-0.68)	-1.49%	(-0.54)	-0.46%	(-0.86)
(-1,0)	-0.42%	(-0.54)	-1.47%	(-1.82)*	2.06%	(1.52)	-1.21%	(-0.89)
(-1,+1)	-0.80%	(-0.85)	1.28%	(-1.31)	1.41%	(1.02)	-1.85%	(-1.15)
(-7,+7)	-0.68%	(-1.33)	-1.70%	(-1.33)	-0.40%	(-0.01)	-1.41%	(-1.55)
(-20,+7)	0.15%	(0.20)	-1.80%	(-1.59)	-1.44%	(-0.50)	-2.08%	(-1.65)*

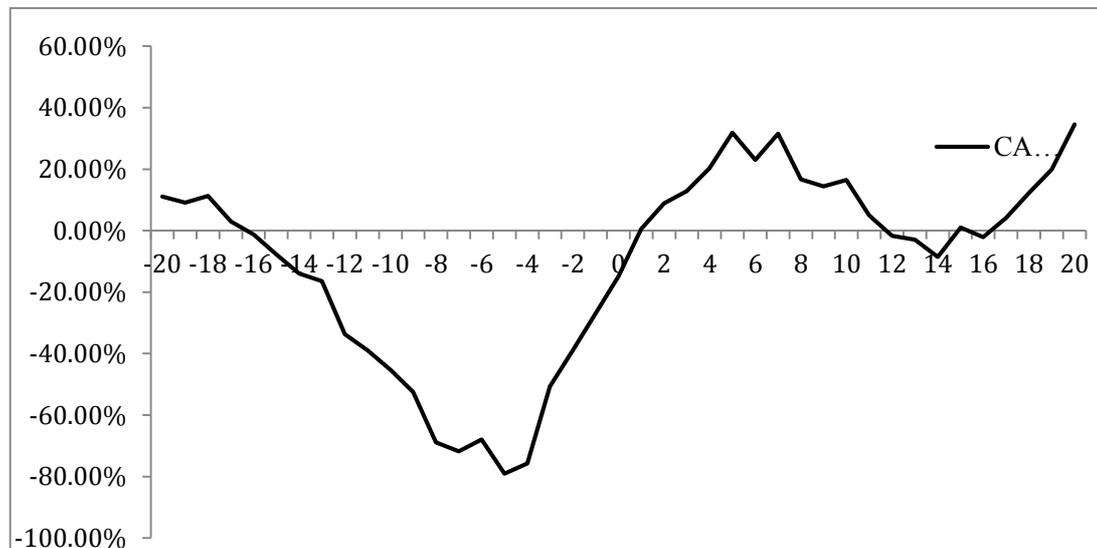
  

EVENT WINDOW	MV	CREDIT SCORE	REPORTING LAG
	CAR	CAR	CAR
	St-test	TSTAT	TSTAT
<b>Panel A: TOP 15 SWITCH-UPS</b>			
(-20,-3)	-5.4%	(-3.01)***	-4.23%
(0,0)	0.32%	(0.47)	0.03%
(-1,0)	0.72%	(1.81)**	-0.17%
(-1,+1)	0.13%	(0.71)	0.37%
(-7,+7)	-4.01%	(-0.32)	-0.28%
(-20,+7)	-0.25%	(-2.20)**	-3.28%
<b>Panel B: TOP 5 SWITCH-UPS</b>			
(-20,-3)	-2.71%	(-1.11)	-1.99%
(0,0)	0.35%	(0.58)	0.11%
(-1,0)	0.08%	(0.09)	-0.36%
(-1,+1)	1.13%	(1.07)	0.42%
(-7,+7)	0.93%	(0.39)	-0.09%
(-20,+7)	-1.63%	(-0.51)	-2.44%
<b>Panel C: TOP 15 LATERAL SWITCHES</b>			
(-20,-3)	-3.13%	(-1.03)	-4.02%
(0,0)	-0.20%	(0.27)	-0.66%
(-1,0)	-0.28%	(-0.26)	-1.14%
(-1,+1)	-0.07%	(-0.06)	-1.13%
(-7,+7)	-2.79%	(-0.94)	-1.30%
(-20,+7)	-3.75%	(-0.95)	-2.10%

The table displays the results for the abnormal returns for each of the seven measures of Nomad reputation. Panel A displays the results for the total switch-ups made to Nomads ranked in the top-55 of the individual rankings, Panel B shows the results for the lateral switches for the top-15 and panels C and D reports the switch-ups and lateral switches for Nomads ranked in the top-5, respectively. \*, \*\*, \*\*\*, denotes significance at the 10%, 5% and 1% levels, respectively.

Figure 5.3 graphically illustrates the CAR earned over the event period (-20, +20) using the standardised abnormal returns as this more normally distributed. The chart clearly demonstrates that the companies switching to a stricter Nomad earned positive abnormal returns on the announcement date, which continued in the days following the announcement. The chart also highlights that these companies were underperforming in the pre-announcement period further showing that the switch to a stricter Nomad was perceived as a good signal. This confirms the second hypothesis that companies switching to strict Nomads are received favourably in the market because the Nomads will be stricter in their role and ensure that managers adhere to the AIM rules and disclose all price sensitive information on a timely basis.

**Figure 5.3 Reporting Lag (-20, +20) for Top-15 Switch-Ups**



The above figure displays the CAR earned over the event window (-20, +20) for the reporting lag index factor. This chart provides evidence for the second hypothesis, which states that companies that switch to stricter Nomads will earn positive abnormal returns.

## 5.7 Summary and Conclusions

This chapter examines whether Nomad reputation is an important factor when companies decide to switch their Nomad. Given that Nomads are the principal regulator and adviser to companies listed on AIM, their reputation and ability to carry out this function should therefore be an important component behind Nomad choice. Looking specifically at Nomad switches, a positive relationship with earning performance and switch-ups to a reputable Nomad is expected. Moreover, a similar positive relationship is expected to occur when analysing company performance against a switch to 'strict' Nomads. Using auditor-switching literature as inspiration for the motives behind Nomad Switching, a Nomad Reputation Index using seven measures of reputation has been developed. This index forms the basis for analysis of abnormal returns around the time of a Nomad Switch using both the market model (*equation 5.1*) and an alternative return generating Fama-French-style (*equation 5.9*). This is the first study to analyse Nomad reputation and create a comprehensive, aggregate index of all Nomads based on seven reputational measures. Furthermore, this is the first study to examine how the market reacts to hiring a Nomad who is perceived to be 'strict' or 'lenient' using an examination of company reporting lags.

The first part of the analysis examines whether, like the big-4 in auditing literature, switches to a large Nomad is related to positive abnormal returns based on the number of clients the Nomad represented and the MV of their clients. In addition, analysis is also undertaken to see whether changes out with the top-15 experience negative abnormal returns. The findings from both models provide significant evidence that when a company switches to both top-15 and top-5 Nomads is associated with positive

abnormal returns, consistent with hypothesis 1a. The findings also suggest that these companies were underperforming prior to the switch as they experience negative abnormal returns. This suggests managers have actively sought to hire a more reputable Nomad. Furthermore, the findings from these two size measures experience the most statistically significant observation suggesting that Nomad size is the most important variable in determining Nomad reputation.

The second hypothesis considers the effects of switches made to Nomads who are seen to be stricter and therefore more closely regulate the companies they represent. This study uses the reporting lag as a proxy for measuring strict Nomads as AIM companies have six months in which to publish their final accounts so stricter Nomads should, in theory, encourage their clients to publish the accounts as soon as possible within the six-month period. This should benefit investors by reducing agency costs and therefore produce a positive market reaction. *Model 2* supports the second hypothesis and the parallel auditing theory proposed by DeFond and Subramanyam (1998) that positive abnormal returns are earned when there is a switch to a perceived 'strict' Nomad, as the reporting lag proxy shows positive abnormal returns earned over the announcement windows when a switch to a Nomad ranked in the top-15, based on their client companies' reporting lag, is made and these results are significant at the 5% level.

The final part of the analysis investigates whether switches to a reputable Nomad earn positive abnormal returns. The findings from the market model show that companies switching upwards are underperforming before the switch and then earn significant positive abnormal returns once the switch is announced. The results are stronger when

the switch is made to a Nomad ranked in the top-5 of each measure as well as the aggregate measure. This suggests that there is an element of concentration within the ranking and that the Nomads ranked in the top-5 are seen as the most reputable in the market as the results are statistically stronger. The results from the more robust multiple regression also indicate that a company switching to a top-15 Nomad significantly underperformed before the switch and then earned positive abnormal returns once the announcement was made. These findings support the findings of Knechel et al (2007) and Lin et al (2009) that switching up to a more reputable auditor produces positive abnormal return. This in turn may illustrate a type of managerial bonding as managers make the costly decision to provide shareholders with assurances regarding their behaviour through greater/more reputable monitoring.

However, there is no evidence to support the Nomad concentration reported in *Model 1*, as there were no significant abnormal returns when switches solely to top-5 nomads were made. This may be due to the second model being more robust and therefore capturing more firm-specific information about the returns earned within the top-5 Nomads. Both model results are consistent when analysing the lateral switches. This is when a switch is made sideways within the top-15 Nomad ranking. The results show that no abnormal returns are earned and in some cases, significantly negative abnormal returns are generated upon the announcement of a lateral switch. This reaction might reveal that investors view such switches as unnecessary and costly given that there is no perceived benefit to switching to a Nomad of equal rank.

## Appendix 5.1

**Table 5.6b Non-Parametric Nomad Reputation Index Results (Disaggregated)**

	Sustained	Net Gainers	Net Losers	Total Clients	MV	Credit Score	Reporting Lag
Panel A: Total Top-15 Switch ups							
<b>(0,0)</b>	0.11	-0.26	-1.06	0.10	0.09	0.37	-0.35
<b>(-1,0)</b>	0.03	-0.85	-0.95	-0.60	-0.46	0.30	-1.08
<b>(-1,+1)</b>	0.08	-0.85	-0.40	-0.55	-0.21	0.38	-0.82
<b>(-20,-3)</b>	-1.00	-0.98	0.02	-2.30	-1.55	-0.79	-2.20**
<b>(-20,+7)</b>	0.10	0.380	-0.05	-0.62	-0.13	-0.45	-1.08
<b>(-7,+7)</b>	1.813	1.935	-0.27	1.01	1.13	0.08	0.72
Panel B: Top-5 Switch-Ups							
<b>(0,0)</b>	0.67	0.59	0.35	0.80	0.09	1.81	1.57*
<b>(-1,0)</b>	1.00	-0.13	0.59	-0.05	0.46	1.08	0.32
<b>(-1,+1)</b>	1.31	-0.31	0.67	0.51	-0.21	1.58	0.38
<b>(-20,-3)</b>	0.90	-1.23	1.23	-0.07	-0.55	0.17	-0.18
<b>(-20,+7)</b>	2.08**	-0.20	1.75*	1.12	0.12	1.116	1.160
<b>(-7,+7)</b>	2.58***	0.92	1.76*	2.52**	1.13	1.61*	2.69**
Panel C: Total Lateral Switches							
<b>(0,0)</b>	-0.32	-0.33	0.25	0.09	-0.30	-0.86	-0.32
<b>(-1,0)</b>	-0.14	-0.63	0.53	-0.25	-0.43	-0.65	-0.24
<b>(-1,+1)</b>	-0.00	-0.43	0.06	-0.07	0.97	-0.19	-0.22
<b>(-20,-3)</b>	-0.02	-0.31	0.31	-1.09	0.28	0.68	0.13
<b>(-20,+7)</b>	0.88	0.87	0.81	0.40	0.74	0.05	0.17
<b>(-7,+7)</b>	1.45*	1.67**	0.79	1.46	1.32	0.58	1.56

The table displays the results for the coefficients for the rank test against abnormal returns earned over different event windows for each of the seven measures of Nomad reputation. Panel A displays the results for the total switch-ups made to Nomads ranked in the top-15 of the individual rankings, Panel B shows the results for the switches ranked in the top-5 and Panel C displays the rank test total lateral switches. \*, \*\*, \*\*\*, denotes significance at the 10%, 5% and 1% levels, respectively.

## Appendix 5.2

**Table 5.8b Disaggregated non-parametric stats Results from Multiple Regression**

EVENT WINDOW	SUSTAINED		NET GAINERS		NET LOSERS		TOTAL CLIENTS	
	Rank	St-test	Rank	St-test	Rank	St-test	CAR	St-test
<b>Panel A: TOP-15 SWITCH-UPS</b>								
(-20,-3)	-1.67**	(-1.01)	-1.73*	(-2.13)**	-1.25	(-0.64)	-1.64*	(-2.99)***
(0,0)	-1.00	(1.69)*	0.72	(1.12)	-0.03	(-0.20)	1.20	(1.79)*
(-1,0)	-0.32	(2.54)**	1.37	(1.92)**	-0.04	(-0.80)	1.54	(3.47)***
(-1,+1)	0.29	(1.86)*	1.00	(1.02)	-0.04	(-0.91)	1.48	(2.22)*
(-7,+7)	-1.34	(1.26)	-0.04	(-0.43)	-0.01	(0.18)	0.23	(-0.36)
(-20,+7)	-2.55**	(-0.44)	-1.21	(-1.43)	-0.38	(-0.97)	1.47	(-2.21)**
<b>Panel C: TOP-5 SWITCH-UPS</b>								
(-20,-3)	2.40	(-0.10)	-1.66*	(-2.32)**	1.12	(-1.34)	0.75	(-1.25)
(0,0)	0.99	(-0.97)	0.00	(-0.07)	0.37	(-0.40)	0.40	(0.52)
(-1,0)	0.22	(0.08)	0.32	(1.31)	0.39	(0.94)	0.50	(1.81)*
(-1,+1)	-2.28*	(-1.61)	0.05	(1.13)	0.02	(0.00)	0.03	(0.53)
(-7,+7)	2.03**	(-1.50)	-0.11	(-1.36)	0.04	(-0.23)	-0.36	(-0.58)
(-20,+7)	3.39***	(-1.68)	-1.38	(-2.24)**	1.10	(-1.60)	-1.38	(-1.73)**
<b>Panel D: LATERAL SWITCHES</b>								
(-20,-3)	1.96	(0.71)	-1.39*	(-1.45)	-0.16	(-0.91)	-0.63	(-0.85)
(0,0)	0.20	(-2.16)**	-0.06	(-0.86)	0.03	(-0.81)	-0.06	(-1.17)
(-1,0)	0.09	(-0.31)	-1.02	(-1.84)*	0.96	(1.76)	-0.13	(-1.34)
(-1,+1)	-0.18	(-1.84)*	-1.01	(-1.75)	0.78	(1.50)	-0.11	(-1.29)
(-7,+7)	1.25	(-1.85)**	-0.08	(-1.45)	0.01	(0.00)	-0.27	(-1.53)*
(-20,+7)	2.87**	(-1.24)	-1.57*	(-2.06)**	-0.01	(-0.13)	-0.33	(-1.75)**

EVENT WINDOW	MV		CREDIT SCORE		REPORTING LAG	
	Rank	St-test	Rank	St-test	Rank	St-test
<b>Panel A: TOP 15 SWITCH-UPS</b>						
(-20,-3)	-0.17	(-3.01)***	-1.80**	(-1.87)**	-1.65	(-2.09)**
(0,0)	-0.18	(0.47)	-0.96	(0.61)	-0.99	(1.37)*
(-1,0)	0.28	(1.81)**	-0.20	(1.21)	-0.18	(2.22)**
(-1,+1)	0.99	(0.71)	-0.29	(0.63)	0.26	(1.02)
(-7,+7)	-2.61**	(-0.32)	-1.40	(0.00)	-2.49**	(-0.84)
(-20,+7)	-1.38	(-2.20)**	-2.70**	(-1.38)*	-1.31	(-2.10)**
<b>Panel C: TOP 5 SWITCH-UPS</b>						
(-20,-3)	-2.32**	(-0.77)	0.57	(-0.72)	0.75	(-1.71)
(0,0)	0.92	(1.43)	1.23	(-0.54)	0.72	(-0.62)
(-1,0)	0.26	(2.85)***	0.21	(0.37)	0.15	(0.14)
(-1,+1)	-0.38	(1.86)*	-0.25	(-0.18)	-0.09	(-0.87)
(-7,+7)	2.15**	(0.21)	0.57	(-0.49)	0.94	(-1.86)*
(-20,+7)	3.80***	(-0.64)	0.70	(-1.35)	1.52*	(-2.72)**
<b>Panel D: LATERAL SWITCHES</b>						
(-20,-3)	-2.15	(-1.72)	0.66	(0.88)	-0.47	(-1.24)
(0,0)	-1.46	(-2.00)**	0.72	(-0.98)	-0.84	(-0.69)
(-1,0)	-0.23	(-1.88)*	0.18	(2.88)***	-0.14	(-0.21)
(-1,+1)	0.35	(-1.39)	-0.27	(2.01)**	-0.17	(-0.36)
(-7,+7)	-1.77	(-1.00)	0.59	(1.08)	-0.19	(-0.95)
(-20,+7)	-3.13	(-1.41)	-0.47	(1.76)	-0.53	(-1.49)

## **Table of Definitions**

Nomads	Nominated Advisers
AIM	Alternative Investment Market
Credit Score	Measure of the probability of company failure in the year following the date of calculation (Qui score downloaded from Fame).
Sustained Nomads	Nomads that are retained by the company throughout the four-year sample period.
Net Losers	Nomads who experience the fewest number of switches away from their firm over the sample period.
Net Gainers	Nomads who experience the most switches to their firm over the sample period.

### 6.1 Introduction

Over recent years, the extent and the way in which companies disclose information has become increasingly important. Moreover, there has been a proliferation of studies examining the disclosure of corporate governance information as well as governance compliance with governing standards (Eng and Mak, 2003; Gompers et al, 2003; Beekes and Brown, 2006; Brown and Caylor, 2006). Lev (2000) and Beattie and Pratt (2002) report that when companies are faced with growing competition, there is a greater demand for information disclosure. Bukh et al (2004) state that this requirement for increased external disclosure is not limited to traditional methods, such as the annual report, but also to: “intellectual capital statements, supplementary business reporting and prospectuses.”

This chapter draws down on the corporate governance and disclosure literature from *chapter 2 (section 2.7)*. By creating a governance index, an investigation is carried out to determine the factors influencing corporate governance compliance on AIM listed companies, with specific focus on the effect of regulation. From analysis, there is strong evidence of governance isomorphism, that is, a convergence in compliance over time rather than as a reaction to regulation. This study contributes to extant literature in the following ways. It extends the analysis undertaken by Mallin and Ow-Yong (2012) by using empirical analysis, and updating the data to include companies that were listed after the most recent financial crisis.

This is one of the few studies that encompasses how managerial perspectives on governance have changed given the latest economic downturn and the subsequent increase in awareness and government intervention on governance issues. Furthermore, this is the only study to date to use ordinal regression methodology for examining the differences between the factors influencing compliant and non-compliant companies. This is a useful technique in determining such differences as the model is non-linear and provides a suitable robustness check for the main multiple least squares regression analysis.

### **6.1.1 AIM and Corporate Governance**

Although limited, there is a small body of literature pertaining to the quality and extent of corporate governance of AIM companies. Mallin and Ow-Yong (1998) study the admission documents of the 241 companies to join AIM in the first 18 months of the market's inception, to assess the level of corporate governance disclosure. To do this they use the City Group for Smaller Companies (CISCO) as a benchmark for analysis. CISCO is the former name for what is now known as the Quoted Companies Alliance (QCA), and has adapted the UK Corporate Governance Code to tailor corporate governance practices to best suit smaller listed companies, like many of those listed on AIM. The study uses five measures of corporate governance against which to analyse the samples admission documents. These measures are: board size, number of NEDs on board, split role of CEO and chairman, board sub-committees, and corporate governance in admission documentation. Although no statistical testing is undertaken, the main findings observe that the close relationship between Nomads and their clients may have a lower level of importance than expected on formal governance measures. They also

observe that companies have better quality governance when their Nomad also acts as the company's broker. Furthermore, companies not raising new capital at admission have a significantly weaker corporate governance structure. The Mallin and Ow-Yong (1998) study was the first major study into AIM companies but it was limited to the first 241 companies that listed. Given that over 5,000 companies have joined AIM (internationally) since its launch, there is an opportunity to update the research into corporate governance to see whether compliance has improved over time. In addition, regression analysis is performed to provide more robust evidence on the level of compliance which will allow more empirical conclusions to be made, as well as establishing whether the findings from Mallin and Ow-Yong (1998) still hold under these conditions. Furthermore, given the reliance placed on Nomads to advise on the suitability of a company's corporate governance (as reported by Mallin and Ow-Yong, 2010), this present study will investigate whether the quality of a supervisee company's corporate governance structure is influenced by the reputation of its Nomad. This analysis will allow us to establish whether Nomads play a corporate governance role for the companies they represent by acting as an external monitor as well as, the extent to which this role is dependent on the reputation of the Nomad.

As alluded to in *chapter 3*, another key aspect of AIM is the light approach to regulatory enforcement it requires. AIM is an exchange-regulated market, which allows AIM to function differently to other markets as they do not have to follow the EU directives on Listing Rules and are not regulated directly by the FCA (Esenlaub et al, 2012). Therefore, unlike companies listed on the Main Market, AIM companies are not required to follow the UK Corporate Governance Code (2010). The voluntary nature of the UK Corporate Governance Code (2010) as applied to AIM companies allows managers who

choose to adopt these standards considerable discretion when choosing the extent and quality of their corporate governance structure. It has been argued that this form of self-regulation is not unsuccessful in encouraging quality corporate governance standards (Finch, 1994; Cuervo, 2002; Maassen et al, 2004). However, it might also be argued that AIM is an international market, attracting global clients and participants who will have some expectations with regards to governance and monitoring in order to mitigate potential agency problems. Furthermore, if companies want to be competitive within AIM, they have to communicate information in the same way as the larger quoted companies on the Main Markets. One approach is to follow the UK Corporate Governance Code (2010) as far as practicable.

The QCA, a not-for-profit organisation aiming to represent the interests of SMEs, has produced the Corporate Governance Guidelines for Smaller Quoted Companies (September 2010)<sup>5</sup>. These guidelines recommend a level of suitable corporate governance disclosure and are specifically designed and adapted for companies listed on the AIM while also incorporating the most recent revisions of the UK Corporate Governance Code (2010). The guidelines consist of 12 main principles that represent minimum best practices for AIM companies. They include (but are not limited to): board balance and size along with skills and experience of the board; communication with investors through investor relations; and corporate social responsibility (CSR). However, these guidelines are, yet again, not obligatory. With no formal requirement to follow any published corporate governance code or practices, managers clearly have considerable discretion regarding the level and quality of corporate governance

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<sup>5</sup> <http://www.londonstockexchange.com/companies-andadvisors/aim/publications/documents/corpgov.pdf>

structures (if any) they choose to employ as well as the extent to which they disclose information to investors. This discretion inevitably raises questions surrounding the disclosure quality of AIM companies as well as governance quality, given that managers have little incentive to release/comply with costly disclosures/governance practices. This can exacerbate the agency problem as the lack of monitoring, normally provided by regulation, can lead to managers holding more information than the market, causing information asymmetries to occur (Denis and McConnell, 2003; Dey, 2008). Verrecchia (2001) finds that information asymmetry declines as information disclosure increases as both managers and investors can make decisions using the same information, reducing the uncertainty for investors. Therefore, the more information managers pass on to the market, the lower the information asymmetries are for that company. Companies should therefore consider disclosing corporate governance information comprehensively to keep information asymmetry to a minimum. Taking measures to reduce information asymmetry lowers managers' cost of capital and the information risk borne by investors (Myers and Majluf, 1984; Barry and Brown, 1984, 1985; Merton, 1987).

However, regulation is not completely absent on the AIM. Companies must adhere to the set of guidelines called the AIM Rules For Companies (May 2014)<sup>6</sup>. Failure to comply with these rules results in a company's shares being suspended or even cancelled. These rules cover the appropriate behaviour of companies before and after listing. In February 2007, AIM Rule 26 was introduced, although companies had till 20<sup>th</sup> August of that year to comply. This Rule stated that each AIM company must, from admission, maintain an up-to-date website containing the following information:

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<sup>6</sup> <http://www.londonstockexchange.com/companies-and-advisors/aim/advisers/rules/aim-rules-for-companies.pdf>

## Exhibit 6.1 AIM Rule 26 Guidelines

- A description of its business and, where it is an investing company, its investing strategy.
- The names of its directors and brief biographical details of each, as would normally be included in an admission document.
- A description of the responsibilities of the members of the board of directors and details of any committees of the board of directors and their responsibilities.
- Its country of incorporation and main country of operation.
- Where the AIM company is not incorporated in the UK, a statement that the rights of shareholders may be different from the rights of shareholders in a UK incorporated company.
- Its current constitutional documents (e.g. its articles of association).
- Details of any other exchanges or trading platforms on which the AIM company has applied or agreed to have any of its securities (including its AIM securities) admitted or traded.
- The number of AIM securities in issue (noting any held as treasury shares) and, insofar as it is aware, the percentage of AIM securities that is not in public hands together with the identity and percentage holdings of its significant shareholders. This information should be updated at least every 6 months.
- Details of any restrictions on the transfer of its AIM securities.
- Its most recent annual report published pursuant to rule 19 and all half-yearly, quarterly or similar reports published since the last annual report pursuant to rule 18.
- All notifications (made through RNS) the AIM company has made in the past 12 months.
- Its most recent admission document (may have previously been admitted under another name or shares cancelled and then re-listed) together with any circulars or similar publications sent to shareholders within the past 12 months.
- Details of its nominated adviser and other key advisers (as might normally be found in an admission document).

The most important development arising from AIM Rule 26 is the requirement for up-to-date corporate governance information to be made accessible to all stakeholders via a company website. Such details include: publication of the company's admission document, features of the board of directors, a biography of specific board members as well as details of board committees, and other specifics about majority shareholders. Before 2007, there was no such requirement to disclose corporate governance information in such a structured and publicly accessible way, although selective data may have been available through the annual reports. Immediately following the adoption of this regulation, in September 2007 the LSE investigated all AIM companies to assess the level of compliance with its new regulation and, as a result, took action against nine companies who were fined a total of £95,000 for various breaches of AIM Rule 26<sup>7</sup>. This highlights the growing importance of regulation on AIM given the willingness of the LSE to intervene and deter further companies from breaching this new regulation, within a relatively short space of time from its adoption.

There is now a greater focus and emphasis on the disclosure of the corporate governance issues as highlighted by AIM Rule 26. This, along with the requirement to publish the company's admission document, creates an opportunity to discover whether companies, at inception, intended to adopt comprehensive corporate governance structures before this rule was implemented. It has also been documented by Certo et al (2001) that corporate governance items, such as board structure and experience, are integral to the success of an IPO. The study asserts that investors use such governance attributes as an

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<sup>7</sup> <http://www.londonstockexchange.com/companies-and-advisors/aim/advisers/aim-notice/aim-29-v-4.pdf>

aid in valuing the company; this can as a consequence reduce the level of underpricing experienced when listing.

A comparative study of the extent of corporate governance compliance before and after the mandatory adoption of AIM Rule 26 will establish whether there is a difference in the compliance for companies listed before and after the introduction of the rule. Additionally, this study will indicate whether the possibility of information asymmetries has reduced in companies listing post-2007, given that disclosure is now mandatory for certain corporate governance aspects. However, if it is found that there is no statistical change in the level of compliance, the theory of governance will be explored.

## **6.2 Literature Review and Hypotheses development**

The main focus of this second study is to examine how corporate governance compliance has changed over time, specifically focussing on how it has changed with the implementation of regulation. However, given the unique nature of AIM companies with regard to self-regulation and as a platform for SMEs, analysis will also be conducted to test this compliance in relation to size, performance and the influence Nomads have on the clients they represent. This section will discuss these topics in more detail as well as develop the associated hypotheses for this study.

### **6.2.1 Regulation**

The seminal papers by La Porta et al (1997); and Shleifer and Vishny (1997) document the effects of corporate governance regulation. These studies have shown that better quality regulation can provide: economic development, greater expansion/access to capital markets, and investors protected against entrepreneurial expropriation. One of the main concerns surrounding AIM companies is information asymmetry resulting from the managerial discretion allowed to managers given the low levels of compulsory regulation. As companies and managers are able to choose the level of their public disclosure (unless the information is price-sensitive), it stands to reason that AIM managers hold a greater level of firm-specific knowledge than investors, as unnecessary and unrequired disclosures are costly. This, in turn, leads to greater information asymmetries. However, since the application of AIM Rule 26, managers have had to abide by stricter corporate governance disclosure rules, providing shareholders with more information and lowering information asymmetries. Therefore, by increasing the

level of information disclosure, information asymmetries between managers and shareholders are reduced (Akhtaruddin, 2009). Furthermore, with AIM Rule 26 requiring the public disclosure of corporate governance structures, it may in turn provide managers with the impetus to improve governance standards from admission.

The rationale behind this is that if investors view the internal corporate governance systems of their company as weak, this is likely to exacerbate the agency problem, and possibly deter potential shareholders from investing in the company. Finally, publishing governance information on an up-to-date website, as required by Rule 26, makes the company more visible to shareholders and other stakeholders (both individually and collectively) providing an effective bonding mechanism as there are more external monitors scrutinising the company. This is consistent with the findings from Easterbrook (1984) who states that increasing a company's visibility reduces agency costs through greater monitoring from investors and other external regulators.

The above literature highlights the requirement for small companies, like those quoted on AIM, to incorporate effective and appropriate corporate governance mechanisms within their company. Prior to 2007, it was difficult for shareholders and other stakeholders to determine how effectively companies were implementing corporate governance mechanisms. Therefore, the agency problems might have been more severe given that managers had more opportunity to make decisions that were not in the best interests of shareholders. Additionally, information asymmetries prior to Rule 26 may have been more acute given that there was no requirement to disclose corporate governance information to shareholders and to do so would have been costly for smaller companies.

The first hypothesis in this study will test whether companies listing before 2007 incorporated corporate governance mechanisms in the same way and whether the quality of corporate governance changed post-2007. This will be achieved by comparing the level of corporate governance before and after this Rule was implemented. It would be expected that AIM Rule 26 encourages companies to follow better quality practices given that this information is now readily accessible and in the public domain. If the quality of corporate governance has significantly increased post-2007, it would also be expected that information asymmetries occurring in AIM companies has decreased over time.

However, the timing of this regulation has other implications for this study. August 2007 saw the real start of the impact of the global economic crisis in the UK, with banks refusing to lend to each other and the subsequent collapse of Northern Rock by September. Therefore, the study's post-regulation sample primarily encompasses companies that listed during or just after the recession. This period witnessed massive amounts of unprecedented government intervention; through nationalisation, to banking reforms. In Europe, Basel III was passed to increase the regulation to the banking sector. In the UK, the British Government employed a rescue package for its failing financial institutions totalling £500 billion in loans and guarantees (Erkens et al, 2012). Grant Kirkpatrick (2009) reports that this economic crisis can be attributed to failures and weaknesses in the corporate governance of financial services companies as existing structures failed to curb the excessive risks being taken by these institutions. Given this, it might be said that during this time, corporate governance requirements also increased as the market required greater transparency and information before considering whether

to invest their money in potentially risky and unstable companies. Furthermore, the increase in regulatory intervention made the field of corporate governance more important than ever before given the perceived link between company failure and poor governance. This all leads to a possible convergence in governance compliance, as companies who require access to the capital market are required to be more transparent.

This idea of isomorphism is detailed in *chapter2 (2.7.6)* and states that a convergence in international regulation, increased competition and changing attitudes to governance have lead this convergence in governance compliance (La Porta et al, 2000; Useem and Zelleke, 2006). This may also have affected AIM companies as, even though corporate governance is voluntary, market participants may still expect these listed companies to report information in the same way as their Main Market counterparts, leading to further convergence between AIM companies and the Main Market, in terms of governance issues.

Martynova and Renneboog (2010) have constructed a comparative analysis index of corporate governance regulatory systems over a 15-year period (1990-2005) for 30 European countries and the US, to examine the different capital market laws throughout these countries and their evolution over time. The study finds that there has been an improvement and convergence over time in regulation to improve corporate transparency and to increase investor protection. It is also noted that common law countries and, in particular, countries of English origin, have the highest level of shareholder protection. Therefore, a second extension will be added to this analysis where it is hypothesised that corporate governance has increased over time as the general

demand for better governance by investors increases alongside a convergence in corporate governance practices.

### **Hypothesis 1:**

H1a: There has been an increase in the level of corporate governance compliance since the adoption of AIM Rule 26.

H1b: There has been an increase in the level of corporate governance compliance, from 1995-2012, leading to a convergence in standards.

### **6.2.2 Company Size**

AIM was created to attract the listing of small and medium-sized enterprises (SMEs) by offering no barriers to entry and limited regulation. This implies that corporate governance on AIM is different and potentially weaker given the costs involved in implementing an appropriate system when compared with the incentives to do so. The Cadbury Report (1995) states that there is a gradual decline in the level of compliance, as companies get smaller. Ragothaman and Gollakota (2009) study the effects of firm characteristics on corporate governance in the US and find that firm size is statistically significant and concludes that small firms are less well governed. Da Silva Rosa et al (2007) examine small firms in Australia and find similar results; small companies are less likely to comply with the corporate governance codes of best practice as they face large costs associated with their implementation.

However, in one of the few studies carried out using the AIM market, Parsa and Kouhy (2008) find that contrary to the above evidence, small companies act similarly to large

companies in respect of social reporting information as a way of maintaining their corporate reputation. To do this, the study uses an indexing approach to check the information disclosed against the list of corporate social reporting items from the *CSR Europe 2003*. They find that SMEs take the same approach as large companies with regard to CSR, as they are aware of the benefits of establishing and preserving their corporate reputation. Other existing literature on corporate governance and SMEs shows that following corporate governance practices results in improved firm value and performance (Borch and Huse, 1993; Johannisson and Huse, 2000).

Mustakallio et al (2002) and Neville (2011) suggest that, given that SMEs are often tightly held with regards to ownership, the agency problem is often reduced because owners and management are often one and the same. Although the owner-manager effect might reduce the traditional agency costs, AIM is an international market and therefore more complicated as the stocks are publicly floated. This means that if companies wish to raise additional capital by listing on AIM, they will have to disclose information similar to their competitors in order to attract new investment. In order for SMEs to grow and develop, experienced management is also required (Corbetta and Montemerlo, 1999). SMEs are noted as having fewer internal resources than large listed companies, which increases the requirement for competent management (Storey, 1994). The role of the board is therefore important to SMEs as it provides advice and expertise to management (Zahra and Pearce, 1989; Forbes and Milliken, 1999). It has also been noted that concentrated ownership can lead to management avoiding risk-taking strategies (Chandler, 1990). In one of the limited studies into the AIM market, Mallin and Ow-Yong (2012) examine the voluntary disclosure of QCA compliance for a sample of 300 companies. The study uses company annual reports to collate the QCA disclosure

information and creates a disclosure index, which is used as the basis for analysis. They find that compliance increases with company size, proportion of independent NEDs, and within former Main Market listed companies.

The evidence for links between company size and corporate governance structures is divided. Ragothaman and Gollakota (2009) find that smaller companies are less well governed while existing literature on AIM indicates that these companies are encouraged to disclose information in the same way as their Main Market counterparts (Parsa and Kouhy, 2008). However, AIM research pertaining directly to governance does indicate that size is positively related to governance. Therefore, the second hypothesis will test whether the quality of corporate governance by AIM companies is affected by company size. This will be undertaken by testing the disclosure of corporate governance indicators against proxies for company size. It is expected that smaller companies will have lower quality corporate governance structures given the associated costs that come with implementing corporate governance.

**Hypothesis 2:**

H2: company size has a positive relation to corporate governance.

### **6.2.3 The Monitoring Role of Nomads**

As noted in Chapter Three, the main regulatory requirement for AIM-listed companies is to retain a Nomad. The Nomad is the principal regulator of the AIM market, a responsibility delegated to them by the LSE. As such, they provide a monitoring and advisory role to ensure that companies comply with the AIM rules appropriately and comprehensively. Fan and Wong (2005) argue that management might employ an external intermediary with better reputation to provide guarantees to investors that the company is credible. Such assurances as a result reduce existing agency costs. Espenlaub et al (2012) investigated the role of Nomads by examining IPO survival rates of AIM companies and Nomad reputation. The study finds that companies who hire a reputable Nomad have significantly longer survival rates, on average by two years. An explanation given for this is that Nomads have concerns over their own reputation so may be concerned about representing a company they expect to have a short survival time.

The findings by Espenlaub et al (2012) document the importance of Nomad reputation although this is restricted to company survival rates. In another AIM study, Mallin and Ow-Yong (2010) carry out interviews with managers, shareholders and Nomads to discuss the importance of corporate governance on AIM and find that companies depend on their Nomad for advice on ensuring a suitable corporate governance structure, while Nomads often decide whether to accept a client based on the quality of their corporate governance structure. There is therefore scope to extend research into the role of Nomads and their reputation in relation to their influence on their client's corporate governance, as there is relatively little existing literature in this area. In addition, as long as the Nomad can show independence, they may also provide brokering services to their

clients. These dual Nomads are known as NomadBros. Mallin and Ow-Yong (1998) analysed the difference between corporate governance indicators and whether a Nomad or a NomadBro represented the company. They find evidence that NomadBro's are associated with better corporate governance across all indicators. Mallin and Ow-Yong (2008) suggest the reason for this observed improvement in corporate governance is due to reputational risk as a NomadBro has more to lose if the company they represent later collapses. However, when statistically analysed in relation to governance disclosure, there is no evidence that this Nomad and broker duality is associated with governance quality (Mallin and Ow-Yong, 2012).

Although there is no literature specifically referring to a Nomad's governance function, it is possible to look at the monitoring role from the external auditor perspective, as in the previous chapter. Hired to carry out two different functions, auditors and Nomads have similar monitoring and advisory roles and must both be independent from the company's they represent. Furthermore, the appointment of a reputable auditor may also provide greater assurances on the quality of the governance role undertaken. The auditors' governance function was first reported in Jensen and Meckling (1979) and this states that the agency problem is mitigated if high quality auditors are appointed. Fan and Wong (2005) studied the governance of auditors in East Asian emerging markets and find that when companies are subject to agency costs, management is more likely to hire a Big-5 auditor. Similarly, Choi and Wong (2007) assert that in countries with a weak legal environment, auditors play a key role in a company's corporate governance structure.

The findings from this auditing literature can be extrapolated in order to study the monitoring role of Nomads. The role of Nomads includes an important governance function as they can provide investors with assurances that companies are complying with the AIM rules, and as a company's sole regulator, guarantee to reprimand companies that do not comply. Additionally, Nomads might also help mitigate the agency conflicts by ensuring that AIM companies follow all the necessary regulation. Therefore, the third hypothesis will test whether a company's corporate governance structure, at admission, is superior when being monitored by a reputable Nomad. The primary focus of this analysis is to extend the literature pertaining to the role of Nomads by establishing how effectively they function as the primary regulator and external monitor of AIM companies. It would be expected that a more reputable Nomad might be more influential in ensuring that their supervisee companies conform fully to corporate governance best practices. Chapter five found robust evidence supporting the top-15 Nomads listed aggregate Nomad reputation index as being reputable Nomads. Therefore, the top-15 Nomad aggregate index is used to determine Nomad Reputation. A second extension is added to this analysis to test the findings in Mallin and Ow-Yong (2008), that Nomads who also provide brokering services are associated with better corporate governance.

**Hypothesis 3:**

H3a: Reputable Nomads have a positive relation with the level of corporate governance.

H3b: Joint Nomad and Broker have a positive relation with the level of corporate governance.

#### **6.2.4 The Admission Document**

In order to test the level of disclosure of corporate governance information and whether regulation has increased the level of this type of disclosure, the information on each company's admission document will be gathered. As previously mentioned, a company's prospectus is becoming increasingly important for developing communication between companies and outsiders (Bukh et al, 2004). Moreover, the adoption of AIM Rule 26 requires companies to keep an up-to-date website containing certain and specific information about the company. This gives companies the opportunity to change and adapt their corporate governance strategies. However, with the requirement to post the admission document, companies are not able to ignore the information already contained therein. As such, there is an opportunity to assess how companies intended to comply with existing corporate governance standards, if at all, and how this has changed now that this document has to be made public on their website once listed.

Beattie (1999) and Cumby and Conrad (2001) have both suggested that a company's prospectus is an indicator of that company's future reporting standard, as they tend to be more future-oriented in their IPO reporting. Daily et al (2003) similarly report that the prospectuses are inclined to be highly accurate because companies are accountable for any misleading or inaccurate information. Bukh et al (2004) has observed that, "*the prospectus usually contains more information about future expectations regarding market developments and earnings, strategic direction and intent, management and board composition, etc., compared to the annual report from the same firm*". Furthermore, Mather et al (2000) and Aharony et al (1993) contend that management are keen to present the company in the best possible light given the incentives to maximise

proceeds from any share issue. Although, Mather et al (2000) do also state that this can lead to earnings management. Thus, the AIM admission document provides insight into the types of information that are selected by a company and its Nomads for presenting the company to its potential investors and analysts. The admission document contains information regarding the company's skills and growth potential as well as the company's financial performance and any risk factors. There are further benefits to transparency and greater disclosure on the admission document; Ang and Brau (2002) providing evidence that greater company disclosure before the IPO reduces flotation costs. Similarly, Schrand and Verrecchia (2004) state that, in the pre-IPO period, a greater frequency of disclosure is related to lower levels of underpricing.

#### **6.2.5 Summary**

The lenient approach to corporate governance regulation on AIM, and the question surrounding the related potentially large information asymmetry problem highlights an opportunity to investigate how effective the approach to minimal regulation has been. There is an opportunity to extend the evidence on the role of Nomads by examining whether the level of corporate governance is enhanced when companies hire a reputable Nomad. In addition to the above areas of study it is also proposed to assess the role of AIM Rule 26 which was introduced in February 2007 (enforced from 20<sup>th</sup> August 2007), to increase information released to the public by requiring all AIM listed companies to keep an up-to-date website that contains information such as RNS news announcements, the admission document and director profiles. Such disclosures, in turn, reduce the information asymmetries between a company's management and shareholders. This regulatory development gives rise to an opportunity to discover how corporate governance practices have changed since 2007. For example, a company intending to

create a board of directors that does not split the role of the chair and the CEO may reconsider this configuration in order to have a more independent board, given that investors will have public access to this information post-2007. Companies are still able to choose the extent of their disclosure as only a minimum level of information is necessary with no requirement placed on the amount of detail needed on the website. Investors may see companies with very little detail on their website as non-compliant and with weak corporate governance. However, it is also worth noting that even before this regulation was implemented, there were still incentives for managers to be fully transparent with regard to the admission document, as greater disclosure is associated with lower flotation costs and reduced underpricing (Schrand and Verrecchia, 2004).

### **6.3 Explanation of Corporate Governance Measurements**

In order to ascertain the level of corporate governance compliance, the corporate governance information factors from the admission document of the 387 AIM companies are gathered. These factors not only highlight the extent of corporate governance compliance by companies but also how compliance has changed following the introduction of AIM Rule 26. Once gathered, each company is given a score based on how they complied with the benchmark/existing guidelines. From here, an index is created to use as the basis for statistical analysis. In addition to the corporate governance measures, the names of each of the samples initial Nomad and Broker will be collected to see whether the extent of compliance is related to the perceived reputation of Nomads. Nomad reputation will be based on the ranking system created in the previous study. More specifically, reputable Nomads are those who score in the top-15 in the aggregate ranking system. The findings from this analysis will indicate whether Nomads play a monitoring role that, in turn, improves the quality of their supervisee's corporate governance systems.

The variables used to determine the level of corporate governance compliance are categories listed in the most recent publications from the UK Corporate Governance Code, the Quoted Companies Alliance: *Corporate Governance Guidance for Smaller Quoted Companies* and the measurements used by Mallin and Ow-Yong (1998) as well as additional variables supported by the relevant literature. The information factors describing these corporate governance measures are shown in *Table 5.1*. The table displays the list of 25 measures and indicates if they appear in the Mallin and Ow-Yong (1998) study, the QCA guidelines and whether the attributes are supported by the

literature. All 25 of these attributes are considered in this study. This section extends the theory pertaining to governance in *chapter 2*, to further explain and provide supporting evidence for the variables used to create the governance index.

**Table 6.1 Measures of Corporate Governance Compliance**

Measures	Mallin and Ow-Yong (1998)	QCA Guidelines	Literature
Total Number of Directors	✓	✓	✓
Number of NEDs	✓	✓	✓
Board Independence	×	✓	✓
Split Role of CEO and Chair	✓	✓	✓
Gender Diversity on Board	×	×	✓
Board Experience	×	✓	✓
Description of Audit Committee	✓	✓	✓
Total No. on Audit Committee	×	×	✓
NEDs on Audit Committee	×	×	✓
Accounting Expert on Audit Committee	×	✓	✓
Times per year Audit Committee Meet	×	×	✓
Description of Remuneration Committee	✓	✓	✓
Total No. on Remuneration Committee	×	×	✓
NEDs on Remuneration Committee	×	×	✓
Solely NEDs on Remuneration Committee	×	×	✓
Remuneration Policy	×	✓	×
Nomination Committee Description	×	✓	✓
Total No. on Nomination Committee	×	×	✓
NEDs on Nomination Committee	×	×	✓
Big-4 Auditor	×	×	✓
Corporate Governance Statement	✓	✓	×
Intention to Follow Combined Code	×	×	✓
Intention to Follow QCA Guidelines	×	✓	✓
Percentage shares issued	×	×	✓
Risk Factors	×	✓	×

The table indicates the variable used in the index to determine the level of corporate governance compliance. It is constructed using the measures found in the Mallin and Ow-Yong (1998) study along with further measures found in the QCA guidelines and finally additional variables from the literature.

### **6.3.1 Board Composition**

Broadly speaking, the role of the board of directors is to give advice and to monitor company management and set the strategic direction of the company (Mace, 1971; Demb and Neubauer, 1992). Kaplan and Minton (2006) also find that directors have an increasing disciplinary role with an observed upward trend of CEO dismissals. The role of the directors is therefore directly related to the corporate governance of the company as they monitor and discipline managers who fail to consider shareholder interests. Consequently, the first measure of corporate governance will be the different aspects of board composition. Mallin and Ow-Yong's (1998) study considers the composition of the board of directors in their study of corporate governance and the AIM. That is, they examined the number of directors and non-executive directors (NEDs) and the split role of the chair and CEO. These measurements are consistent with the recommendations of the QCA, whose guidelines specifically refer to corporate governance practices for AIM companies and state that there should be a minimum of two NEDs and separate chair and CEO. However, the QCA further extends this and states that the board should be independent and not dominated by one person or a group of people. In addition, the experience of the board should also be considered.

Board composition is also supported in the literature relating to SMEs (mentioned in more detail in *chapter 2*). Pettigrew and McNulty (1995) find that NEDs are able to challenge strategies and decisions made by the owner-managers who may not be acting in the best interests of other stakeholders. Brunninge et al (2007) also find that weaknesses in management strategies can be overcome by employing more NEDs on the board. As well as monitoring management, Keck (1997) and Leonard and Sensiper

(1998) find that outside directors have a wide variety of skills and expertise allowing them to make more informed strategic decisions.

When considering the extent of corporate governance compliance of AIM companies, the measurements proposed by Mallin and Ow-Yong (1998) will therefore be extended to include the QCA's recommendation for board experience (using age as a proxy) and the more recent literature pertaining to board diversity.

### **6.3.2 Board Independence**

Another aspect of board composition is independence. This measure is mentioned in Mallin and Ow-Yong's (1998) study as well as the QCA guidelines. Furthermore, the literature supports this variable as Xie et al (2003) find that greater representation from independent directors lowers the level of earnings management as well as providing additional outside monitoring. Rosenstein and Wyatt (1990) study the appointment of outside directors and wealth effects. The study concludes that significant positive returns are earned when such appointments are made. Given this, the next independent variable will be board independence. This is considered to be achieved when at least 50% of the board are NEDs, taking into account the QCA guidelines that the board should also have at least two NEDs. It should be noted that, from the data collection, NED's are referred to, rather than independent directors, in the AIM admission documents. Only a handful of admission documents consider which NEDs are independent under the UK Corporate Governance code provisions regarding whether they have worked for the company or hold shares. Therefore, this study will use the presence of NEDs as a proxy for Board Independence as they do not form part of the executive management team and are still required under the QCA guidelines.

### **6.3.3 CEO Duality**

The next variable concerns the split role between the CEO and chairman of the board. Agency theory suggests that agency costs can be mitigated by splitting the role of the CEO and chairman (Grove et al, 2011). This measure is also found in Mallin and Ow-Yong's (1998) study as well as the QCA guidelines. Agency theory predicts that when there is CEO duality, the interests of the owners will be sacrificed to a degree in favour of management, that is, there will be managerial opportunism and agency costs (Donaldson and Davis, 1991). It has also been reported that CEO duality reduces board control as the CEO as chairman has greater power and can limit the control and monitoring from the rest of the board (Boyd, 1995). Boyd (1995) has also reported that this duality has also resulted in higher executive compensation while Yermack (1996) state that duality leads to lower board independence.

### **6.3.4 Director Experience/Age**

The next document variable is director age. Grove et al (2011) explains that there are mixed findings about this variable and the effects it has on performance. One argument is that older directors may have more experience and knowledge, which, in turn, provides greater monitoring of company management and therefore lower agency costs. However, Grove et al (2011) also report that older directors may not provide such monitoring as they lack energy and appropriate incentives to do so which then increases agency costs. This last point is corroborated by Core et al (1999) who conclude that governance is weaker when a higher proportion of outside directors are over 70 years old. The empirical findings from the Grove (2011) study reveals that director age

follows a u-shape curve and that while older directors are associated with better performance, this benefit diminishes as director age goes past a certain point.

For this study, director age will represent a proxy for board experience, as the above literature explained that older directors have more knowledge and expertise to effectively monitor managers. The variable for board experience is also required under the QCA guidelines.

### **6.3.5 Gender Diversity**

More recent literature has expanded the theory of board composition to consider the gender roles of the board of directors. There is a view that considering there are so few women executives employed as NEDs compared with their male counterparts, female NEDs might better represent the concept of independent directors (Adams and Ferreira, 2009). In addition to this, Adams and Ferreira (2009) also document that females are more likely to join other monitoring committees (such as, the audit and remuneration committees) and have better attendance records than their male counterparts. Dunn (2010) studies the appointment of female directors to the board and finds that women who are appointed to all-male boards have greater expertise within that company or have financial/legal knowledge that is required by the board. Brammer et al (2009) studies corporate reputation and the role of gender, and find that the presence of women on the board is industry specific and is only positive when the industry operates close to final consumers.

The literature regarding women on the boards is becoming wider but is still developing with regards to how females impact from a corporate governance perspective. However,

the extant literature does suggest that females on the board do play a corporate governance role such as providing a monitoring role by more frequently sitting on board committees and providing greater expertise to the board itself. There is no gender requirement within the QCA guidelines.

This will be the first study to consider gender diversity in relation to governance compliance.

### **6.3.6 Audit Committee**

A further measure of corporate governance, considered by Mallin and Ow-Yong's (1998) study is the presence of audit and remuneration committees. These requirements are consistent with the QCA's guidelines although the QCA extends this condition by stating that companies should also include a remuneration policy (although this variable has been dropped from this study due to all companies in sample providing this information). There is extensive support for these measures in the literature. The audit committee is considered first. The audit committee's main responsibility is to oversee and monitor the financial reporting process, ensuring transparency by mediating between the external auditor, the internal auditors, managers, and directors (Saibaba and Ansari, 2011; Puri et al, 2010). Karamanou and Vafeas (2005) assert that the presence of audit committees is associated with effective corporate governance. Kalbers and Fogarty (1993) and DeZoort (1998) also suggest that members of the audit committee should be independent and that at least one member should have accounting management expertise.

The frequency of audit committee meetings should also be considered. Menon and Williams (1994) theorise that committees that meet more frequently are better able to

monitor the quality of information that is communicated to stakeholders. With regards to SMEs, Kang et al (2011) studies the audit committee for SMEs in Australia. The findings are consistent with previous literature: the most significant aspects of the audit are independence, committee expertise and the frequency of committee meetings.

This study will therefore consider the presence and features of the audit committee when examining the corporate governance compliance of AIM companies. It will be necessary to determine the presence of this committee, its size (at least two members for QCA compliance), whether it is independent, if an accounting expert is appointed, and how often it meets.

### **6.3.7 The Remuneration Committee**

The management of remuneration is also a measure of corporate governance and its inclusion is also required under the QCA guidelines. The remuneration committee is a subgroup of the main board of directors charged with the responsibility of determining the pay of the companies' top managers (Conyon and Peck, 1998). The presence of this committee is a strong corporate governance mechanism as without it, executives would be able to award themselves inflated salaries that are not in line with shareholders' interests (Vafeas, 2003). This committee should, ideally, be made up of NEDs as any executives on the board would be deciding their own pay. However, UK evidence suggests that this is not the case. Main and Johnston (1993) concluded that in two fifths of cases, directors were appointed to their own remuneration committee. However, Evans and Evans (2002) found that having more NEDs on the remuneration committee did not have a significant effect on CEO compensation.

For this study, therefore, the inclusion of the remuneration committee as a corporate governance measure will be based on the QCA prerequisite that the committee has at least two members and consists solely of NEDs.

### **6.3.8 The Nomination Committee**

The final, less familiar committee, is the nomination committee. Although not expressly required under the QCA guidelines or measured in Mallin and Ow-Yong's (1998) study, the existence of a nomination committee plays an importance governance role for companies. This committee plays a central role in overseeing matters of corporate governance for the board by considering the size, structure and composition of the board, and the retirement and appointment of directors. It is also charged with developing the quality of nominees to the board and ensuring the integrity of the nominating process (Watson, 2004). In addition, a nomination committee is required under the UK Corporate Governance Code and should contain a majority of independent non-executive directors. Kanagaretnam et al (2007) state that the nomination committee enhances the monitoring effectiveness of the board.

Given the recent focus on board composition and diversity, the role of a nominating/corporate governance committee has become a more popular feature within a company's governance structure. Furthermore, Brown (2002) finds that the adoption of a nomination committee is related to greater stakeholder involvement in governance issues. Ruigrok et al (2006) studies the determinants and effects of the nomination committee. They find that the existence of the nominations committee is associated with a higher number of independent directors and foreign directors but not gender diversity. The study also states that CEOs who also serve as Chairmen (CEO duality) are less likely

to favour a nomination committee as it could reduce their influence on the selection of board members and promote changes in company policy. Similarly, Chapple et al (2013) find that CEO duality reduces the effectiveness of the nomination committee.

For analysis purposes, this variable is treated in the same way as the other two board sub-committee variables. Therefore, measures of compliance include: the presence of the committee, the boards having at least two members, and consisting solely of NEDs.

### **6.3.9 Corporate Governance Policy Statement**

The final measure of corporate governance is the presence of a corporate governance policy statement. This statement will identify a company's intentions to comply with the UK Corporate Governance Code and/or the QCA guidelines. The statement also explains the roles of the board and the various committees alongside how they intend to implement these corporate governance mechanisms appropriately. This measure is used in Mallin and Ow-Yong's (1998) paper and is also present in the QCA guidelines as a practice that should be implemented in all AIM companies. In addition to the intention to follow the corporate governance code, the disclosure of the intention to follow the QCA guidelines will also be analysed. Although the QCA guidelines are tailor-made for AIM companies, they are less onerous than the UK Corporate Governance Code. As this section is just noting the intention of companies to follow the corporate governance code or the QCA guidelines, these variables are both binary.

### **6.3.10 Control and External Variables**

As well as the governance indicators mentioned above, this study also incorporates three other indirect or external governance measures that are considered important factors when examining a company's governance structure. These measures are the role of Nomads, the percentage of shares issued and whether a Big-4 auditor represents the company. The role of Nomads has already been discussed in the literature chapter, but background and support for the remaining measures are discussed below.

### **5.3.11 Percentage of Shares Issued**

Ownership structure is another important factor when analysing corporate governance. If a company is only issuing a small percentage of total shares to the market, this indicates that there are still a large proportion of the shares privately held, or large blockholder ownership. In this instance, the blockholders have concentrated control of the company and are led by their own incentives/gain rather than what might be best for the company (Connelly et al, 2010). Holderness (2003) also reports that large blockholders typically serve on the board of directors. This raises concerns regarding the agency problem, as there will be little motivation for a company to maintain high quality corporate governance structures unless it is in the best interests of the blockholders. It has already been noted by Mallin and Ow-Yong (1998) that companies raising capital during AIM listings have better quality governance. Therefore, it might be said that companies who offer a larger percentage of shares to the market are relinquishing control from blockholders, or just raising new capital for investment.

However, Mallin and Ow-Yong (2012) found no evidence that ownership structure influences the level of disclosure of governance attributes.

This study will incorporate the percentage of shares being placed as a measure of governance within the index.

### **6.3.12 Companies Represented by a Big-4 Auditor**

Another indirect and outside governance variable is Big-4 auditor. That is, companies who retain one of the Big-4 auditors are associated with better corporate governance. Mitton (2002) studies the impact corporate governance on the East Asian financial crisis. He reports that a company may have higher disclosure quality if its auditor is one of the Big-6. This is supported by Michaely and Shaw (1995); and Dye (1993) who document that these Big-6 firms encourage increased transparency and eliminate mistakes in a firm's financial statements in order to protect their reputation and reduce their legal liability if mistakes are found. Therefore, given this, it would be expected that retaining a Big-4 auditor is associated with better corporate governance. If companies, post-2007, became concerned about the shareholder perception of their corporate governance structure, given this information now has to be documented on the company website, it might be expected that there will be a greater frequency of Big-4 auditors observed in the post period compared to pre-2007.

## 6.4 Data Selection and Descriptive Statistics

The sample consists of a stratified sample of 200 companies from the original 475 companies used in the first project. Given that this sample only contains AIM companies admitted up to August 2007, and a before and after comparison of AIM Rule 26 is required, a random sample of 200 post-August 2007 admissions is added, providing a final sample of 400 companies. Only companies with an original admission document were used in order to omit any that may have re-listed. Therefore, all companies in the sample appear once. All financial entities were omitted<sup>8</sup> as well as companies with a market cap below £5m<sup>9</sup>. However, due to subsequent cancellations/delistings, the final sample consists of 190 pre and 197 post- AIM Rule 26 adoption companies, making a combined sample size of 387 companies. *Table 5.2* displays the distribution of the sample companies over the years they were admitted. The final column demonstrates the number of companies admitted as a percentage of AIM companies still trading on AIM (as at November 2014)<sup>10</sup>. The sample represents an average of 41.48% of admission per year (against companies that are still live). It is also worth noting that the total number of admissions fell sharply in 2007 from 338 (in 2006) to 197 and has continued to fall since, with another substantial dip in listings in 2009. This corresponds with the previous observation that this sample may be affected by the UK economic crisis which started in 2007.

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<sup>8</sup> Financial companies are subject to different disclosure regulations.

<sup>9</sup> This is to avoid the potential problem of thin trading as this data is used in the third project where daily stock market data is analysed.

<sup>10</sup> <http://www.londonstockexchange.com/companies-and-advisors/aim/publications/documents/documents.htm>

Finally, as this sample originally only included companies that were still trading (dead companies do not have websites to access the admission document), the data may also be subject to survivorship bias. Therefore, analysis can only be undertaken for companies that may already have superior governance to those that have failed, as well as those that have managed to survive the financial crisis. However, since the data was collected, 35 companies have been cancelled and these companies remain in the sample for analysis, using a proxy called live/dead. This will highlight whether cancelled companies have weaker governance although the sample of dead companies may be too small for robust analysis.

**Table 6.2 AIM Admission Sample**

Year	Observations per year	Total AIM Admissions	Admission still live	Obs/Live Companies
1995	3	120	9	33.33%
1996	4	131	13	30.77%
1997	3	100	8	37.50%
1998	2	68	9	22.22%
1999	4	96	10	40.00%
2000	13	265	33	39.39%
2001	15	162	33	45.45%
2002	10	147	38	26.32%
2003	10	146	27	37.04%
2004	32	294	85	37.65%
2005	42	399	146	28.77%
2006	48	338	138	34.78%
2007	45	197	106	42.45%
2008	33	87	51	64.71%
2009	15	30	18	83.33%
2010	52	76	79	65.82%
2011	38	67	71	53.52%
2012	18	47	59	30.51%
<b>Total</b>	<b>387</b>	<b>2770</b>	<b>933</b>	<b>41.48%</b>

The table displays the number of admissions over each year in the sample period. The second column shows the total number of admissions to AIM, while the third indicates how many of these companies are still trading. The fourth column provides the per year representation of AIM admissions as a percentage of total companies admitted in that year that are still live.

The combined results (before & after 2007) from the data collection are shown in *Table*

5.3. One important point to note is that the data collection procedure highlighted that

AIM admission documents tend to follow a generic format. Given this, three of the variables are dropped as they appeared in every admission document making analysis of these variables ineffective. The dropped variables are: Remuneration Policy, Corporate Governance Statement, and Risk Factors. Although the corporate governance variable has been dropped, the information contained in this section of the admission document is used in other variables. There are also two types of data amongst these variables, binary and numeric. Where the descriptive statistics measurements are blank (-), the variable is binary. Also worth noting are the missing variables. In regard to how many times a year the audit committee meets, over half the observations (51%) are missing. In addition, in 71.5% of cases, there is no reported nomination committee (shown in NO column rather than missing). This is likely due to the nomination committee being a more recently developed attribute of board structures. The next section provides a more detailed explanation behind the variables used to create the corporate governance score and corresponding indexes.

**Table 6.3 Descriptive Statistics from Data Collection**

	Average	Median	Min	Max	SD	Kurtosis	NO (0)	YES (1)	Observations	Missing data
<b>Panel A: Data Collection Statistics</b>										
Before(0)/after(1)	-	-	-	-	0.501	-2.008	198	189	387	0 0%
Big-4 Auditor	-	-	-	-	0.466	-1.376	264	122	386	1 0%
Total Number of Directors	3.564	5	2	10	1.377	-0.077	-	-	387	0 0%
Number of NEDs	2.651	2	0	7	1.202	0.675	-	-	387	0 0%
Board Independence	-	-	-	-	0.491	-1.852	156	231	387	0 0%
CEO Duality	-	-	-	-	0.315	4.194	43	344	387	0 0%
Gender Diversity	-	-	-	-	0.471	6.013	317	61	387	0 0%
Average Age of Board	50.488	51	34	65	5.424	-0.023	-	-	375	12 3%
Audit Committee Description	-	-	-	-	0.268	8.104	30	357	387	0 0%
Audit Committee Total	2.470	2	0	5	0.715	1.732	-	-	345	42 11%
Audit Committee NEDs	2.201	2	0	5	0.810	0.804	-	-	344	43 11%
Present Accounting Expert	-	-	-	-	0.431	-0.595	85	261	346	41 11%
How Many Times Board Meets	2.148	2	0	4	0.699	1.916	-	-	189	198 51%
Remuneration Committee Description	-	-	-	-	0.301	5.116	39	348	387	0 0%
Remuneration Committee Total	2.476	2	0	5	0.693	1.671	-	-	340	47 12%
Remuneration Committee NEDs	2.241	2	0	5	0.813	0.867	-	-	340	47 12%
Solely NEDs on Remuneration Comm	-	-	-	-	0.421	-0.331	78	262	340	47 12%
Nomination Committee Description	-	-	-	-	0.452	-1.091	276	111	386	0 0%
Nomination Committee Total	2.793	3	0	7	1.137	2.769	-	-	111	276 71%
Nomination Committee NEDs	2.349	2	0	4	0.817	0.846	-	-	106	281 73%
Combined Code	-	-	-	-	0.358	1.884	57	323	380	7 2%
QCA Guidelines	-	-	-	-	0.471	-1.480	254	125	379	8 2%
% Issue	37.68%	32.77%	1.75%	100%	0.229	-0.353	-	-	283	104 27%
Top -15 Nomad	-	-	-	-	0.390	0.627	315	72	387	0 0%
Dual Nomad and Broker	-	-	-	-	0.405	0.115	80	307	387	0 0%
<b>Panel B: Index Scores Distribution</b>										
Score	12.79	13	2	22	3.595	0.159	-	-	387	0 0%
Index Score	2.63	3	1	4	0.870	-0.643	-	-	387	0 0%
Score less Nomad	11.81	12	2	20	3.458	0.097	-	-	387	0 0%
Index Score less	2.58	3	1	4	0.858	-0.600	-	-	387	0 0%

The table displays the descriptive statistics for data collection process. Panel B provides the stats for the governance score and the indexes. Nomad attributes are omitted in order to analyse the impact of Nomad reputation.

To ascertain whether there has been an improvement in corporate governance since the adoption of AIM Rule 26: a before and after comparison is carried out. To do this, an indexing method is used by checking items disclosed in each of the sample firm's admission document against a list of information items. The use of the admission statement is similar to the method used in the Mallin and Ow-Yong's (1998) report on corporate governance, although extended by the use of statistical analysis. A score is given depending on whether the item is included in the admission document.

This method has been used in many studies relating to company disclosures such as, Wallace and Naser (1995); Owusu Ansah (1998); Gompers et al (2003); Brown and Caylor (2006); and Parsa and Kouhy (2008). Owusu Ansah (1998) also states that one of the main advantages of this method is that indexing provides the ability to rank companies in terms of disclosure scores. This will allow consideration of whether AIM companies listed after 2007 scored higher in terms of corporate governance than companies listed prior to that year. Wallace and Cooke (1990) identified that this method allows indexing scores to be statistically tested thus allowing this study to use more in-depth statistical analysis, making the results more robust.

With the data collected, each company is given a score for each of the variables when that variable meets the minimum requirement set out in the QCA guidelines and other benchmarks set out in the Mallin and Ow-Yong (1998) paper and the literature or the Combined Code. A combination of both guidelines is used as companies can voluntarily state to follow either code. As presented in *Table 5.3*, 323 companies disclosed the intention to follow the combined code in comparison with 125 that chose to adopt the QCA, which is specifically tailored for AIM companies. *Exhibit 6.2*

provides the detail of the scoring system for governance compliance. As there are no listing rules on AIM, other than the requirement to retain a Nomad, the Main Market requirement of 25% share issue is used. If the company meets the minimum requirement they score one, if they did not, then they score zero.

These variables along with the other binary variables described in *Table 6.3* provide a maximum score of 23 (*Exhibit 6.2*). It is also worth noting that the index, as with Brown and Caylor (2006); and Gompers et al (2003), is equally weighted. This dichotomous weighting method may limit the index's ability to capture the relative significance of the individual CG provisions (Marston and Shrives, 1991; Beattie et al, 2004; Barako et al, 2006). However, there is currently no robust theoretical framework regarding weights applied to different CG provisions, therefore an un-weighted approach avoids a bias towards a particular corporate governance provision (Marston and Shrives, 1991; Botosan, 1997; Owusu-Ansah, 1998). Furthermore, previous studies indicate that the use of weighted and un-weighted indices produce similar results (Owusu-Ansah, 1998; Barako et al, 2006).

## Exhibit 6.2 Corporate Governance Scoring System

### CGI Benchmark

At least four directors, less than 9

Minimum of two NEDs on Board

Board Independence (proportionally more NEDs appointed)

Split Role of CEO and Chair

Board Experience (Using median age across sample)

Gender Diversity (at least one female appointment)

Presence of Audit Committee

>2 Directors on audit committee

Solely NEDs on Audit Committee

Accounting Expertise on Audit Committee

State frequency of meetings (1,0)

Presence of Remuneration Committee

>2 Directors on remuneration committee

Solely NEDs on Remuneration Committee

Presence of Nomination Committee

>2 Directors on Nomination committee

Solely NEDs on Nomination Committee

Represented by Big-4 Auditor

Top-15 Nomad

Dual Nomad

State intention to Follow Combined Code

State Intention to Follow QCA guidelines

Min 25% share issue

In order to test the relation between Nomad reputation and Nomad duality, these variables are removed from the *Total Score* to create the measure *Score Less Nomad*. This measure has a maximum score of 21. As the scores are a continuous variable, these two variables (*Score & Score Less Nomad*) will be used to undertake Least Squares regression analysis. In addition, two further indices are created, based on the two variables mentioned above. The indexes range from 1-4, where 1 represents low corporate governance compliance and 4 represents good levels of compliance. These indices are titled: *Index Score* and *Index Score Less Nomad*. Panel B of Table 6.3 also provides the distribution of the scores for all four indices. Considering the continuous *score/ (score less Nomad)* first, out of a possible score of 23(21), the highest score is 22(20) and the lowest is 2 for both measures. The kurtosis for both these scores are low but for robustness additional analysis is undertaken to test for skewness. The results are presented in the Table 6.4 below. There is no statistical evidence of skewness or kurtoses, so it can be taken that the dependent variables used for Least Squares analysis are normally distributed<sup>11</sup>.

**Table 6.4 Tests for Normal Distribution**

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	Adj chi2	Prob>chi2
Score	387	0.1536	0.4693	2.57	0.2767
Score less Nomad	387	0.0974	0.6199	3.00	0.2228

Table provides output from the test for skewness and kurtosis. The null for skewness and kurtosis is that the variable is normally distributed. In both dependent variables, the null that variables are normally distributed cannot be rejected, at the 5% level.

<sup>11</sup> Additional charts are provided in Appendix 5.1 to corroborate the normality of the dependent variables.

In relation to the remaining two ranking indices, the highest score is 4 and the lowest is 1. *Exhibit 6.3* shows how the continuous score index corresponds to each level in the level in the index. The scores in brackets represent the *Score Less Nomad* variable. It should also be noted that there are a smaller number of scores represented in sections 2 and 3 of the ranking indices. However, as ordinal regression analysis will be used, there is no detrimental impact on analysis, as this method avoids the assumption that the distance between categories is equal (Long and Freese, 2006). With this, there are now four different measures of corporate governance compliance, the raw scores and their corresponding index. *Figure 6.1* illustrates the distribution of scores for the two continuous variables. They are also split to show how the scores differ before and after the adoption of AIM Rule 26. The figure illustrates that the score after the regulation is introduced is higher than before. Furthermore, the ‘before’ variables peak scores are lower than those achieved by the ‘after’ variables.

**Exhibit 6.3 Index Scores Determination**

Score can range from 0-23 but highest observed score is 21 (Score less Nomad)		
<u>Index:</u>		
	<u>Index Score</u>	<u>Index Score Less Nomad</u>
1	<8	(<7)
2	9-12	(8-11)
3	13-16	(12-15)
4	>17-	(>16)

Exhibit describes how the scores are distributed among the ranking indices. Index Score Less Nomad remove the Nomad reputation index so they can be analysed separately. 1 represents the lowest compliance level and 4 the highest level of compliance.

**Figure 6.1**     **Distribution of Corporate Governance Scores**

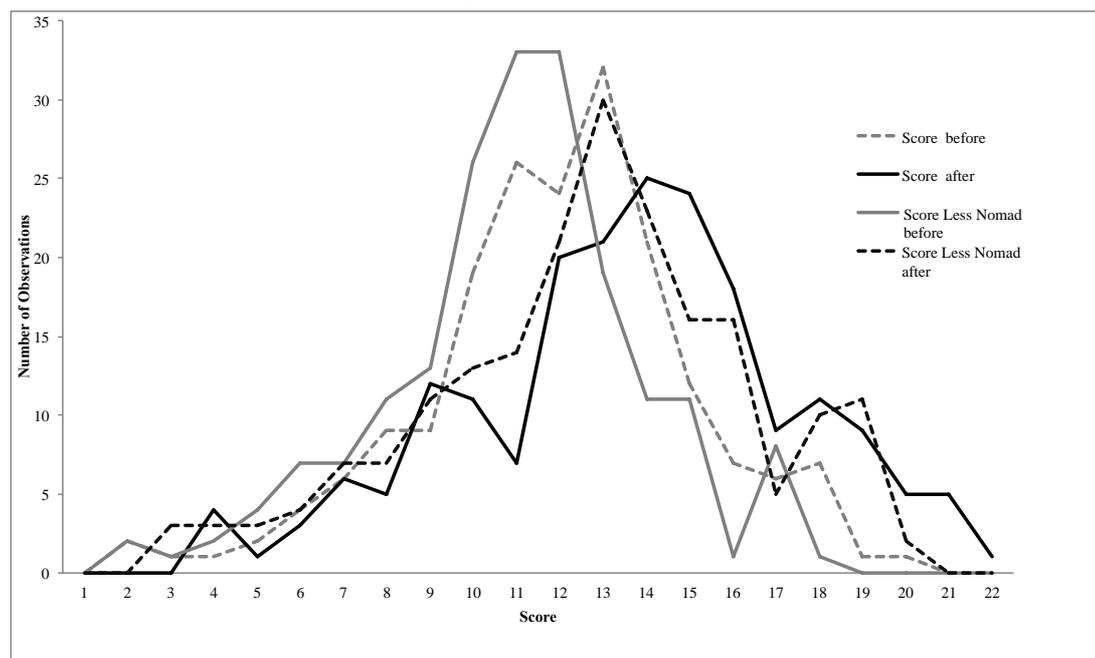


Figure illustrates the distribution of the corporate governance scores and indices. They are separated into before and after to observe any changes in the score that might have been brought about by AIM Rule 26. Figure shows that scores produced after the regulation are higher than those achieved beforehand.

### 6.4.1 Control Variables

As indicated in the previous section, firm-specific controls are required. These include time controls, size controls, performance controls and whether the company is still trading or cancelled (live/dead). These form the independent variables for the regression analysis. The size controls are and *Log market cap* and are determined at listing point. The performance measures are based on operating performance (and return-on-assets (ROA)), and on company valuation (Tobin's Q, log Book-to-market). With regards to Tobin's Q, Gompers et al (2003); Bebchuk and Cohen (2004); and Bebchuk, Cohen and Ferrell (2004) find that firms with stronger shareholder rights have higher *Tobin Q's*, indicating that better-governed firms are more valuable. In this

study Tobin's Q is calculated by  $Tobin's\ Q = \frac{(\text{Equity Market value} + \text{liabilities market value})}{(\text{equity book value} + \text{liabilities book value})}$

$DataStream\ code = \frac{((WC08001) + (WC03351))}{((WC03501) + (WC03351))}$ . The performance measures are all winsorized at the 1% level (top and bottom) to control for spurious outliers (Brown and Caylor, 2006). Furthermore, these variables are also industry mean adjusted using industry sectors for all AIM UK companies<sup>12</sup>.

Table 6.5 displays the results from the Pearson correlation analysis with the two continuous governance score variables and the independent variables<sup>13</sup>. The first panel displays the correlation for the independent variables. Given there is strong statistical significance (at 1%) in some of the variables and there is more than one variable representing size and profitability, it is also necessary to check for multicollinearity. The coefficients themselves aren't at a level that would indicate multicollinearity. Furthermore, for robustness, regressions were undertaken using these control variables to analyse the r<sup>2</sup> for possible multicollinearity. There was no evidence to suggest this was an issue and therefore, the variables are appropriate and used without further manipulation. However, the variables *market cap*, *total assets*, and *book-to-market* have been transformed using their logs/natural logs (to improve linearity), and are now named *log market cap*, *log assets* and *Ln b/m*, respectively.

Panel B displays the results for the corporate governance scores against the independent variables. The table shows significant positive correlation between both score variables and the before/after dummy. This indicates that corporate governance

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<sup>12</sup> Details of ratios with corresponding DataStream codes can be found in appendix 6.2

<sup>13</sup> Details of variable names can be found in Appendix 6.3.

increased after 2007 when AIM Rule 26 was introduced. Similarly, the year dummy also indicates that corporate governance improves over the sample period (1995-2013). The *score* index also shows a positive relation between the Nomad variables and corporate governance, suggesting that a more reputable Nomad represents better quality companies or possibly provides more effective monitoring services that encourage their companies to adopt more comprehensive governance policies. However, none of the performance measures are significant. With regard to the size controls, there is a positive correlation between score and the *log assets* variable, which supports the second hypothesis that larger companies have better quality corporate governance. *Panel B* also reports the descriptive statistics for the independent variables.

For robustness, *Panel C* shows the association between each of the corporate governance variables and the independent control variables. There is positive significance across 12 of the 23 variables for the before/after dummy. This indicates that companies had better governance after 2007. There is also positive significant evidence across the size variables (*log assets* and *log market cap*), which provides evidence for the second hypothesis that larger companies are associated with better governance. There is little evidence supporting the fourth hypothesis that governance is associated with better performance as shown in the *sales growth*, *ROE* and *ROA* variables. The results for the valuation variable, *Tobin's Q*, are also mixed and often negative, suggesting better governance is related to poor performance.

**Table 6.5 Descriptive Statistics for Independent Variables**

	Market cap		Tobin's Q		ROA		Ln b/m
Panel A: Pearson Correlation Matrix for independent Variables							
Tobin's Q	0.0864*				-0.285***		-0.368***
ROA	0.141***		-0.285***				0.124**
Ln b/m	0.0207		-0.368***		0.124**		
Log Market cap			0.0864*		0.141***		0.0207
Panel B: Pearson Correlation between Independent Variables and Governance Index Scores							
Controls	Score less Nomad	Score	Mean	Standard Deviation	Min	Max	N
Before/after dummy	0.226***	0.236***	.501	.50	0	1	387
Year	0.305***	0.315***	12.49	3.694	1	19	387
Live/dead	0.00397	0.00341	0.909	.2872	0	1	387
Log Market cap	0.00543	0.00633	9.905	1.346	101.13	1979395	384
Tobin's Q	-0.00658	0.0100	1.285	4.529	-2.344	32.498	385
ROA	-0.0329	-0.0363	-.1497	0.487	-3.06	.473	386
Ln b/m	-0.0450	-0.0353	5.560	2.591	-6.495	8.699	387
Top 15 Nomad	0.215***		0.186	.389	0	1	387
Dual Nomad	0.252***		0.793	.405	0	1	387
Panel C: Pearson Correlations between Independent Variables and All 23 Governance Measures							
	Before after dummy	Year	Live dead	Log Market cap	Tobin's Q	Roa	Ln b/m
Big 4 auditor	0.055	0.0102	0.001	0.099*	0.033	0.032	0.002
Total number of directors	-0.051	-0.0209	0.069	-0.009	-0.072	0.031	0.019
Min 2 NEDs	-0.016	0.0488	-0.039	0.041	-0.105**	0.008	-0.005
Board independence	0.199***	0.241***	-0.037	-0.022	0.013	-0.018	-0.093 <sup>†</sup>
CEO duality	0.130**	0.150***	-0.026	-0.050	-0.057	-0.047	0.022
Women on board	0.0452	0.0281	-0.109**	0.034	-0.011	0.033	0.060
Age 50	0.131**	0.193***	0.056	0.024	-0.029	-0.027	0.120**
Audit committee	0.044	0.136***	0.010	-0.026	-0.061	-0.004	0.062
Audit committee >2	0.081	0.0487	0.014	-0.013	0.065	-0.031	-
Solely NEDs on audit	-0.034	0.0151	-0.037	0.059	-0.021	-0.005	0.223***
Present accounting expert	0.073	0.0377	-0.057	0.091*	-0.049	0.103 <sup>†</sup>	0.040
Frequency of meeting	0.081	0.144***	0.053	-0.004	0.018	-0.031	0.025
Remuneration comm >2	0.032	0.138***	0.044	-0.098*	-0.130**	-0.009	-0.049
Remuneration total	0.118**	0.0838 <sup>†</sup>	0.015	-0.046	0.029	-0.055	0.127**
Solely NEDs on remunerat'n	-0.033	0.0561	-0.043	0.128**	-0.073	-0.003	-
Nomination committee	0.183***	0.0561	-0.041	0.093*	0.043	0.007	0.158***
Nomination >2	0.170***	0.184***	0.037	0.026	0.052	-0.022	0.004
Solely NEDs	0.145***	0.135***	-0.029	0.071	0.050	0.012	-0.051
Combined code	-0.136***	-0.0581	0.023	-0.007	-0.023	0.040	-0.096 <sup>†</sup>
QCA	0.479***	0.470***	0.024	0.097*	0.095*	-0.046	0.031
% Issued shares	0.0911*	0.157***	0.071	0.026	-0.091 <sup>†</sup>	-0.048	0.019
Top 5 Nomad	0.102**	-0.0946	0.012	-0.040	-0.022	-0.013	-0.057
Dual Nomad	0.086*	0.103**	-0.005	0.025	-0.090*	0.043	0.054

Table displays correlations for corporate governance scores and independent variables along with descriptive statistics for the independent variables. *Panel A* provides Pearson correlations for the independent variables; *Panel B* displays the correlation between independent variables and the corporate governance scores as well as the descriptive statistics; and *Panel C* provides the correlation for the individual attributes that feature in the index against the independent variables. Significance at (\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ).

## **6.5 Data Analysis**

### **6.5.1 Regression Analysis**

The evidence supporting the hypotheses thus far has been univariate. It is now necessary to undertake multivariate analysis in the form of Least Square (LS) regression and ordinal logit/probit regression (Ologit/Oprobit). As mentioned before, the continuous score variables will be used for the LS regression and the indexes will be used in the Ologit/Oprobit as this is the appropriate method for ordinal dependent variables (Long and Freese, 2006). The study uses four main models, which are presented below.

The approach taken with this multivariate analysis is consistent with other governance index analysis from Wahab et al (2007); Brown and Caylor (2006); and Gompers et al (2003). However, this is the first study to measure corporate governance using an ordinal regression model.

### **6.5.2 Least Squares Regression Methodology**

The first analysis employs Least Squares regression methodology. Although a linear model, it is suitable in this analysis as there is no perfect multicollinearity between the independent variables. Furthermore, the robust standard errors are used to control for heteroskedasticity. There are four models presented below. The first model (*a&b*) include all the controls, part *1a* includes the Nomad variables in the index and *Model 2* omits the Nomad variables from the index, and instead includes them as explanatory variables to test for governance in relation to Nomad reputation. Finally, the

independent variables are all collected and calculated using DataStream. The models are as follows:

### Model 1

$$\begin{aligned} \text{Scorelessnomad} = & \beta_0 + \beta_{\text{beforeafterdummy}} + \beta_{\text{year}} + \beta_{\text{livedead}} + \\ & \beta_{\text{logmarketcap}} + \beta_{\text{tobinsq}} + \beta_{\text{roa}} + \beta_{\text{lnb/m}} + \beta_{\text{top15nomad}} + \beta_{\text{dualnomad}} + \varepsilon \end{aligned} \quad (6.1)$$

### Model 2

$$\begin{aligned} \text{Score} = & \beta_0 + \beta_{\text{beforeafterdummy}} + \beta_{\text{year}} + \beta_{\text{livedead}} + \beta_{\text{logmarketcap}} + \\ & \beta_{\text{tobinsq}} + \beta_{\text{roa}} + \beta_{\text{lnb/m}} + \beta_{\text{top15nomad}} + \beta_{\text{dualnomad}} + \varepsilon \end{aligned} \quad (6.2)$$

Where,

*Score* = The corporate governance score with the Nomad variables included

*beforeafterdummy* = AIM Rule 26 interaction (before=0, after=1)

*year* = dummy for all years in sample

*livedead* = dummy for whether company is still listed (no=0, yes=1)

*marketcap* = Market Capitalisation

*tobinsq* = Tobin's Q (method in Appendix 6.2)

*ROA* = Return on Assets

*logb/m* = book-market-ratio

*top15nomad* = Nomads ranked in top-15 for reputation (using chapter four findings)

*dualnomad* = Nomads who also provide dual Nomad and brokering services.

### **6.5.3 Least Squares Results**

Table 6.6 displays the results from the LS regressions analysis. Both permutations of the regression model provide strong evidence (at 1% level) that corporate governance has increased over time, consistent with hypothesis 1(b). However, there is no significance associated with the before/after dummy, meaning there is no evidence

supporting the first hypothesis that governance increased after the adoption of AIM Rule 26. This analysis therefore supports the theory of a general convergence in governance standards rather than the effects of regulatory intervention.

Furthermore, there is weak evidence in support of the second hypothesis that company size is associated with superior corporate governance when considering the *log market cap*, which is significant at the 10% level. These findings therefore support those by Ragothaman and Gollakota (2009) and Da Silva Rosa (2007) that smaller companies may lack the resources to implement the same standard of corporate governance as larger companies.

With regard to Nomad reputation, the findings suggest that Nomad reputation is positively associated with corporate governance. There is evidence that companies represented by a top-15 Nomad are positively associated with corporate governance at the 10% level in the full sample. However, there is no significant finding to support the theory that Nomads who provide a dual brokerage service plays a role in corporate governance. This is consistent with the findings from Mallin and Ow-Yong (2012).

Finally, there are mixed reactions between governance scores and the control measures. The only significant result is with the valuation variable: *Ln b/m* (book-to-market), which is significantly negative at the 5% level across all windows. This indicates that as governance compliance improves, the value of that company decreases. Similarly, all association with Tobin's Q are negative although not significant in any window. There is also a significant negative relation between governance and ROA (at 10%) in the last model iteration.

**Table 6.6 OLS Regression Results for Governance Scores**

	(1) Score Less Nomad	(2) Score
Before/after	-0.242 (-0.46)	-0.273 (-0.47)
year	0.331*** (4.56)	0.334*** (3.97)
Live/dead	-0.268 (-0.41)	-0.254 (-0.38)
Log market cap	0.179 (1.19)	0.261* (1.74)
Tobins Q	-0.0215 (-0.42)	-0.0454 (-0.98)
ROA	-0.0102 (-0.03)	-0.122 (-0.32)
Top-15nomad	0.751** (1.97)	
Dual nomad	0.560 (1.25)	
Log bm	-0.116 (-1.57)	-0.159* (-1.83)
_cons	-654.6*** (-4.50)	-659.1*** (-3.92)
<i>N</i>	371	371
<i>R</i> <sup>2</sup>	0.130	0.109
adj. <i>R</i> <sup>2</sup>	0.109	0.092
F	7.309	7.160
df_m	9	7
df_r	361	363

Table provides the results from the least squares regression analysis. Score includes the Nomad variables while Score less Nomad omits them. The independent variables are company size, operative performance, Nomad reputation. There are also controls for year and whether the company is still live. Performance, size and value measure are industry adjusted and winzorised at 1% level, top and bottom to remove spurious outliers. Statistical significance at (\*\*\*) 0.01, \*\* 0.05, \* 0.1).

#### 6.5.4 Sensitivity Analysis

In addition to examining how the corporate governance index interacts with the independent variables, it is also of interest to analyse how each of the compliance variables is associated with the independent control variables. To do this, each of the 23 governance variables that comprise the governance index becomes the dependent variable. The results are displayed in *Table 6.7*. Interestingly, the before/after dummy shows negative statistical significance across the variables: Min 2 NEDs, Solely NEDs on the audit committee, the presence of a remuneration committee, and solely NEDs on the remuneration committee. This is inconsistent with the 1<sup>st</sup> hypothesis that compliance has improved with the adoption of AIM Rule 26 and rather supports a theory of self-regulation. Similarly, the Kay Report (2012) states that regulation should only be implemented when in the best interests of both companies and investors. Furthermore, the disclosure of the intention to follow the combined code is significantly negative while QCA guidelines are significantly positive. This is due to the change in preference over time to move from the combined code, to the QCA guidelines. However, it should be noted that although the QCA guidelines are tailored for AIM companies, the burden to comply is much lower and may not indicate an increase in governance quality.

Consistent with the previous index analysis, there is significant evidence of an increase in compliance over time. This supports hypothesis 1b that governance has converged over time. Literature pertaining to isomorphism supports these findings as Di Maggio and Powell (1983); La Porta et al (2000); and Useem and Zelleke (2006) all document that regulation, external monitors and competition all lead to governance standards eventually converging. Furthermore, the operating performance measures are consistent with the index analysis and find that compliance has a negative effect on

operating performance. The observed negative relation is particularly strong for the size of the audit and remuneration committees. Although this is inconsistent with prior literature, Bebchuk et al (2009) does note that performance and governance exhibit endogeneity conflict. Therefore, it could be postulated that the increased compliance is due, in part, to a period of poor operating performance.

The log assets variable also provides strong support for the second hypothesis that larger companies are better governed. The size variable proved statistical significance for 11 out of the 23 governance measures. However, there is no relation between company size and disclosing the intention to follow either the combined code or the QCA guidelines. There is also no relation between size and Nomad reputation. It would have intuitively been expected that only large companies would have the finances and resources to hire a reputable Nomad, however, there is no support for this empirically.

The final measure to be examined concerns the Nomad reputation indicators. There is significant support for the third hypotheses that governance is positively related to Nomad reputation and dual Nomads. Considering the top-15 Nomad variable first, there is a strong association between companies who hire a top-15 Nomad and a Big-4 auditor. Given that Nomads and auditors provide an important monitoring role, the appointment of both implies a willingness to adopt quality corporate governance mechanisms. There is also strong evidence that top-15 Nomads are associated with the size of the equity offering. This implies a negative relation with Nomad reputation and ownership concentration and suggests that companies hire a more reputable Nomad when they wish to raise capital from their flotation. Furthermore, there is strong

positive evidence of a relation between Nomad duality with split roles of CEO and chair, and the presence of audit, remuneration and nomination committees. This supports hypothesis 3b that dual Nomads are associated with better governance as well as empirically confirming the theory purported by Mallin and Ow-Yong (1998); and Mallin and Ow-Yong (2008).

**Table 6.7 Regression Results for Each Index Variable**

	Before after dummy		Year		Live/dead		Log Market cap		Tobin's q	
Big-4 Auditor	0.0842	(-1)	-0.00882	(-0.78)	0.0146	(0.17)	-0.0076	(-0.31)	0.00437	(0.8)
Total Directors	-0.0684	(-1.31)	0.00366	(0.49)	0.0617	(1)	-0.00259	(-0.18)	-0.00118	(-0.39)
Min 2 NEDs	-0.112*	(-1.80)	0.0148	(1.59)	-0.0688	(-1.31)	0.0089	(0.56)	-0.00424	(-1.21)
Board Independence	-0.0372	(-0.45)	0.0335***	(3.11)	-0.124	(-1.43)	-0.0383*	(-1.71)	-0.000617	(-0.19)
CEO Duality	0.027	(0.46)	0.0093	(1.01)	-0.046	(-0.77)	-0.0114	(-0.82)	-0.00181	(-0.44)
Gender Diversity	0.0258	(0.36)	-0.000444	(-0.05)	-0.169*	(-1.92)	-0.00266	(-0.12)	-0.00148	(-0.61)
Board Experience	-0.049	(-0.56)	0.0289**	(2.46)	0.068	(0.73)	-0.00558	(-0.23)	-0.00114	(-0.21)
Audit Committee	-0.0696	(-1.36)	0.0128*	(1.68)	-0.0149	(-0.30)	-0.0114	(-0.85)	-0.000727	(-0.23)
Audit Total	0.067	(0.8)	-0.00131	(-0.12)	-0.0226	(-0.25)	-0.0341	(-1.54)	-0.000159	(-0.04)
Solely NEDs on Audit	-0.131*	(-1.83)	0.0144	(1.29)	-0.0873	(-1.36)	-0.00573	(-0.30)	0.00115	(0.34)
Accounting Expert	0.025	(0.3)	-0.00119	(-0.09)	-0.052	(-0.67)	0.0196	(0.77)	-0.00623	(-1.25)
Times per year they meet	-0.0818	(-0.94)	0.0317***	(2.79)	0.0178	(0.19)	-0.0131	(-0.53)	0.000095	(0.02)
Remuneration Committee	-0.0882	(-1.57)	0.0180**	(2.19)	0.0283	(0.45)	-0.0115	(-0.77)	-0.00397	(-0.81)
Remuneration Total	0.0969	(1.16)	-0.00135	(-0.12)	-0.0173	(-0.19)	-0.0223	(-0.96)	-0.00277	(-0.52)
Solely NEDs on Remuneration	-0.223**	(-2.49)	0.0315**	(2.46)	-0.107	(-1.11)	0.0166	(0.68)	-0.00644	(-1.25)
Nomination Committee	0.0663	(0.87)	0.0151	(1.43)	-0.0905	(-1.11)	0.0137	(0.64)	0.00426	(0.93)
Nomination Total	0.00937	(0.14)	0.0195**	(2.12)	0.0416	(0.58)	-0.0134	(-0.72)	0.00427	(1.06)
Solely NEDs on Nomination	0.06	(0.92)	0.00756	(0.84)	-0.068	(-0.97)	-0.00958	(-0.53)	0.00868**	(2.21)
Combined Code	-0.169***	(-2.75)	0.00933	(1.1)	0.0788	(1.18)	0.0088	(0.51)	0.00253	(0.69)
QCA	0.288***	(3.97)	0.0321***	(3.18)	-0.0498	(-0.64)	-0.00817	(-0.40)	-0.000339	(-0.08)
Min 25% Issue	-0.0438	(-0.51)	0.0213*	(1.79)	0.11	(1.19)	0.00703	(0.29)	-0.0118**	(-2.27)
Top-15 Nomad	-0.0364	(-0.43)	-0.0085	(-0.72)	-0.0278	(-0.30)	0.0408*	(1.72)	0.000363	(0.07)
Nomad Duality	0.0345	(0.48)	0.00843	(0.86)	-0.00004	(-0.00)	0.0203	(1.02)	-	(-2.09)

**Table 6.7 (contd.) Regression of each Index Variable**

	ROA		Top-15 Nomad		Dual Nomad		Ln b/m		_cons	
Big-4 Auditor	0.0651	(0.73)	0.147***	(2.79)	-0.00113	(-0.02)	-0.00463	(-0.38)	17.32	(0.77)
Total Directors	0.0387	(0.85)	0.0325	(1.12)	0.0501	(1.12)	-0.000878	(-0.14)	-6.762	(-0.46)
Min 2 NEDs	0.00236	(0.05)	0.0129	(0.35)	0.0642	(1.21)	-0.0092	(-1.39)	-29.37	(-1.57)
Board Independence	-0.0189	(-0.25)	-0.0756	(-1.37)	0.00688	(0.11)	-0.0312***	(-3.93)	-66.60***	(-3.09)
CEO & Chair split	-0.0467	(-0.87)	0.00882	(0.25)	0.134***	(2.67)	0.00188	(0.26)	-17.76	(-0.96)
Gender Diversity	-0.00493	(-0.07)	-0.017	(-0.37)	0.0286	(0.55)	0.00166	(0.2)	0.921	(0.05)
Board Experience	0.00853	(0.09)	0.0226	(0.4)	-0.0952	(-1.42)	0.0186*	(1.83)	-57.50**	(-2.45)
Audit Committee	-0.0186	(-0.45)	-0.0123	(-0.42)	0.0893**	(2.09)	0.00286	(0.41)	-24.71	(-1.62)
Audit Total	-0.033	(-0.42)	0.0821	(1.47)	0.00905	(0.14)	-0.0452***	(-4.96)	3.012	(0.13)
Solely NEDs on Audit	-0.00932	(-0.13)	0.0791*	(1.67)	-0.00953	(-0.17)	0.00383	(0.39)	-28.45	(-1.26)
Accounting Expert	0.023	(0.32)	-0.0239	(-0.42)	-0.0495	(-0.73)	-0.00807	(-0.86)	2.592	(0.1)
Times per year they meet	-0.0227	(-0.28)	0.0829	(1.44)	-0.0323	(-0.47)	-0.0144	(-1.52)	-62.93***	(-2.76)
Remuneration Committee	-0.0045	(-0.10)	-0.014	(-0.43)	0.0900*	(1.95)	0.00786	(1.01)	-35.21**	(-2.13)
Remuneration Total	-0.0718	(-0.90)	0.0456	(0.8)	0.0859	(1.36)	-0.0355***	(-3.85)	2.986	(0.13)
Solely NEDs on Remuneration	-0.067	(-0.81)	0.0396	(0.68)	-0.0473	(-0.67)	-0.0111	(-1.00)	-62.81**	(-2.45)
Nomination Committee	-0.00164	(-0.02)	0.0401	(0.79)	0.132**	(2.18)	-0.0180*	(-1.82)	-30.59	(-1.45)
Nomination Total	-0.0252	(-0.39)	0.0672	(1.52)	0.0357	(0.68)	-0.0201**	(-2.31)	-39.33**	(-2.13)
Solely NEDs on Nomination	0.0629	(1.01)	0.0408	(0.95)	0.0307	(0.6)	0.0038	(0.45)	-15.25	(-0.85)
Combined Code	-0.0319	(-0.54)	0.0218	(0.53)	0.039	(0.8)	0.00386	(0.48)	-18.06	(-1.06)
QCA	0.00896	(0.13)	0.0366	(0.76)	-0.0517	(-0.91)	-0.0166*	(-1.77)	-63.85***	(-3.16)
Min 25% Issue	-0.143*	(-1.73)	0.145**	(2.54)	-0.0374	(-0.55)	0.00428	(0.38)	-42.58*	(-1.79)
Top-15 Nomad	-0.051	(-0.62)	-0.00316	(-0.14)	-0.0157	(-1.42)	0.046	(0.019)	10	(350)
Nomad Duality	-0.0935	(-1.36)	-0.0012	(-0.06)	-0.000674	(-0.07)	0.03	(0.002)	10	(350)

Table provides the results from the least squares regression analysis for all 23 individual governance measures. The independent variables are as before and measure company size, operative performance, Nomad reputation. There are also controls for year and whether the company is still live. Performance, size and value measure are industry adjusted and winzorisized at 1% level, top and bottom to remove spurious outliers. Statistical significance at (\*\*\*) 0.01, (\*\*) 0.05, (\*) 0.1).

### 6.5.5 Ordinal Logit/Probit Regression Methodology

The use of ordinal logit/probit has not to date been utilised in corporate governance index analysis. However, this technique is particularly useful when the data is ordinal and the values of each category have a sequential order where the value of one category is higher than the previous one. Long and Freese (2006) note that although ordered outcomes are consecutive, linear regression analysis is not appropriate as ordinal outcomes violate the assumptions of the linear regression model. This is supported by McKelvey and Zivona, (1975); and Winship and Mare (1984).

The purpose of this analysis is to establish how well the response categories are predicted by the responses to other questions (independent variables), or more simply, how changes in the predictors explain the probability of observing a particular ordinal outcome. It is an extension of the logistic regression model that applies to binary dependent variables but allows for more than two (ordered) response categories. The model for the ordinal logit/probit is presented below and is based on the model provided by Long and Freese (2006). Ordered logit and ordered probit use the same model but the distribution is different. Ordinal logit uses a standard logistic distribution while ordinal probit follows a standard normal distribution. For robustness, both methods are used here although they should produce similar results. The start point for the model is the underlying equation (*Model 3*), where  $y^*$  is the unobserved dependent variable,  $x$  is the vector of the independent variables,  $\beta$  is the unknown parameter vector and  $\varepsilon$  is the error term.

In ordinal logit/probit, instead of  $y^*$  the following is observed:

$$\begin{aligned}
y &= 1 && \text{if } y^* \leq u_1 \\
y &= 2 && \text{if } u_1 < y^* \leq u_2 \\
y &= 3 && \text{if } u_2 < y^* \leq u_3 \\
y &= 4 && \text{if } y^* \geq u_3
\end{aligned}$$

In this case,  $y$  is the level of corporate governance compliance (1=bad, 4=good) and  $u$  is the vector of the unknown threshold parameters that is estimated using the  $\beta$  vector (Sawkins et al, 1997). As the name suggest, ordered logit/probit has to be ordered from low to high, this analysis will use the index scores detailed in *Table 6.3* as the distribution of scores. With regard to the model, which measures the probability of observing a particular outcome, the error term is assumed to have a standard logistic distribution. The models are described below:

#### Ordinal Regression Model (Model 4)

The Underlying model:

$$y^* = \beta'x + \varepsilon \quad (6.3)$$

Instead of  $y^*$  the following is observed:

$$\begin{aligned}
y &= 1 && \text{if } y^* \leq u_1 && \text{(low governance compliance)} \\
y &= 2 && \text{if } u_1 < y^* \leq u_2 && \text{(low/medium governance compliance)} \\
y &= 3 && \text{if } u_2 < y^* \leq u_3 && \text{(medium governance compliance)} \\
y &= 4 && \text{if } y^* \geq u_3 && \text{(good governance compliance)}
\end{aligned}$$

The Ordered Logit Model:

$$\Pr[y_i = j] = F[u_j - \beta^i x_i] - F[u_{j-1} - \beta^i x_i] \quad (6.4)$$

Therefore,

$$\Pr[y_i = j] = \frac{1}{1+e^{-u_j \beta^i x_i}} - \frac{1}{1+e^{-u_{j-1} \beta^i x_i}} \quad (6.5)$$

Where,

- $u_j$  are the unknown parameters to be estimated. (1-4) which denote weak to strong corporate governance compliance.
- $F$  is the cumulative distribution function (cdf) of the error term  $\varepsilon$ .
- For ologit,  $F$  has a logistic distribution with  $\text{Var}(\varepsilon) = \pi^2 / 3$ .
- For probit,  $F$  has a standard normal distribution cdf

- Finally,  $i$  is the observation.

Before the Ordered logit/probit model is applied, it is important to discuss the underlying assumption when using ordinal regression models (ORM). Using the notation presented in Long and Freese (2006), ORM can be written as:

$$\begin{aligned} \Pr[y = 1|x] &= F[T_m - x\beta] \\ \Pr[y = m|x] &= F[T_m - x\beta] - F[T_{m-1} - x\beta] \quad \text{Form= 2 to j-1} \\ \Pr[y = J|x] &= 1 - F[T_{m-1} - x\beta] \end{aligned}$$

From here, we can compute the cumulative probabilities:

$$\Pr[y \leq m|x] = F[T_m - x\beta] \quad \text{Form=1 to j-1} \quad (6.6)$$

This equation highlights the ORM is equivalent to  $j-1$  binary regressions with the critical assumption that the slope coefficients are identical across each regression. This means, given four ranking outcomes, each of the corresponding probability curves varies only by being moved to the left or right, and are therefore parallel. This leads to the assumption that the  $\beta$ s are equal across each probability equation. Put another way, the coefficients that describe the relationship between the lowest category (1) and all higher categories of the responses (2, 3, & 4) are the same as those that describe the relationship between the next lowest category and all higher responses. Given this assumption, one model can be used for all outcomes rather than different models to explain the relation between each outcome group. If the test produces a significant result, then the assumption it violated and an alternative method needs to be used.

The approach used to test this assumption is the Brant test (Brant, 1990). This is a user defined Stata command and estimates the coefficients from  $j-1$  binary regressions, using comparisons of the separate but correlated fits to the binary logistic models

underlying the overall model (Brant, 1990). This command tests that the coefficients across all independent variables are all simultaneously equal. *Table 6.8* displays the results for the Brant test. The output for the Brant shows that the overall model does not produce a significant result, so does not violate the parallel slopes assumption. Therefore, changes in probabilities, and further analysis using the ordinal logit model, are carried out with these variables omitted.

**Table 6.8 Brant Test of Parallel Slopes Assumption**

Variable	Chi <sup>2</sup>	P>chi <sup>2</sup>	df
All	1.60	1.000	20
Before/after dummy	12.75	0.002	2
Year	7.71	0.021	2
Live/dead	3.12	0.211	2
Log Market cap	3.33	0.189	2
Tobin's Q	45.80	0.000	2
ROA	1.50	0.473	2
Top-15 Nomad	2.08	0.354	2
Dual Nomad	0.21	0.899	2
Log assets	2.83	0.243	2
Ln b/m	0.85	0.655	2

The table presents the results for the Brant test which test for the parallel slopes assumption. The Chi<sup>2</sup> identifies variables that may not have equal coefficients. Although, the overall test is not significant, Tobin's Q and the before/after dummy are significantly different from the other coefficients Log assets is included in this test to increase the performance of the Brant test.

### 6.5.6 Ologit Results

*Table 6.9* displays the results from the ordinal logit and probit regression analysis. The analysis is undertaken for the complete index score as well as the index score less Nomad, to allow analysis to be carried out on the third hypothesis relating to Nomad reputation. The table displays the ordinal log coefficients along with their associated test statistic. Interpretation of the coefficient is that for a one unit increase in the predictor (index score), the explanatory variable is expected to change by its respective regression coefficient in the log-odds scale, while the other variables in the model are held constant.

The results are broadly consistent with the Least Squares regression analysis, as there is strong evidence that score increases over time, rather than in 2007 with the implementation of AIM Rule 26, as year is positive and significant at the 1% level for all four index scores. This supports hypothesis 1b, and provides additional support for the isomorphism/convergence theory suggested by La Porta et al (2000). Furthermore, in regard to the Nomad analysis, there is a positive relation at the 1% level for both models between Nomad reputation and compliance (*coeffs. For Ologit and Oprobit: 3.26 and 3.47, respectively*). This highlights the importance governance role played by Nomads in influencing governance structures among the companies they represent. Finally, there is no evidence that index scores are associated with company performance.

**Table 6.9 Ordinal Regression Results for Index Scores**

	Index Score	Index Score	Index score less Nomad	Index score less Nomad
	Ologit	Oprobit	Ologit	Oprobit
Before/after	-0.0511 (-0.16)	-0.0854 (-0.46)	-0.124 (-0.39)	-0.119 (-0.64)
year	0.182*** (4.13)	0.109*** (4.20)	0.176*** (3.96)	0.107*** (4.09)
Live/dead	-0.417 (-1.25)	-0.190 (-0.96)	-0.167 (-0.48)	-0.0392 (-0.20)
Log market cap	0.145* (1.87)	0.0840* (1.91)	0.0898 (1.15)	0.0617 (1.39)
Tobins Q	-0.0147 (-0.62)	-0.00780 (-0.69)	-0.0187 (-0.82)	-0.0143 (-1.27)
ROA	-0.153 (-0.67)	-0.0475 (-0.36)	-0.0862 (-0.39)	-0.0414 (-0.31)
Top-15nomad			0.709*** (3.26)	0.430*** (3.47)
Dual nomad			0.838*** (3.30)	0.459*** (3.09)
Log bm	-0.0793* (-1.90)	-0.0473* (-1.95)	-0.103** (-2.40)	-0.0642** (-2.57)
cut1	0.617 (0.66)	0.417 (0.77)	0.905 (0.95)	0.687 (1.26)
cut2	2.592*** (2.74)	1.551*** (2.86)	2.960*** (3.08)	1.861*** (3.37)
cut3	4.843*** (5.00)	2.880*** (5.22)	5.224*** (5.31)	3.203*** (5.71)
<i>N</i>	371	371	371	371

Table provides the results from the ordinal logit and probit regression analysis using the index less Nomad score. *t* statistics in parentheses (\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ).

With the ordinal logit and probit models now performed, it is possible to examine the changes in the predicted probability of observing a specific outcome ( $y=1-4$ ) when focusing on changes in the level of  $x$ . This is a useful technique for examining the predicted probability when there are one or more variables held at a certain value or even a change in value (Xu and Long, 2005; Williams, 2006). For example, the probability of observing good levels of governance (score 3&4) are greater after 2007 can be tested. To do this, the predicted probability is calculated when the *before/after dummy* is equal to one, and repeated when the *before/after dummy* is equal to zero. The change in predicted probability is then calculated by subtracting these two outcomes (probability after minus probability before).

The model used to test the predicted outcome for a specified change in  $x$  is:

Model 5

$$\frac{\Delta \Pr yi = j}{\Delta x} = \Pr(yi = j|x_A) - \Pr(yi = j|x_B) \quad (6.7)$$

The associated confidence interval is:

$$Pr \left[ \frac{\Delta \Pr(yi = j)}{\Delta x} \Big|_{LB} \leq \frac{\Delta \Pr(yi = j)}{\Delta x} \leq \frac{\Delta \Pr(yi = j)}{\Delta x} \Big|_{UB} \right] = 0.95 \quad (6.8)$$

Where,

$\Delta \Pr(yi = j)$  is the predicted change on probabilities over the ordinal outcomes, 1-4.

$\Delta x$  is the change in the independent variable from  $x_A$  to  $x_B$ .

LB and UB denote the upper bound and lower bound of the confidence interval.

It would be expected that if corporate governance increased after 2007, then the change in predicted probability would be positive for scores 2&3 (as the probability for producing ‘good’ scores before should be lower) but negative for 1&2 (as there should

be a greater proportion of 'bad scores' before 2007 relative to the post 2007 period). As before, the analysis is conducted for both ordinal logit and probit models and the results are displayed in *Table 6.10*. *Panel A* provides the predicted probability when the *before/after dummy* = 1 (representing the post 2007 period); *Panel B* provides the *before/after dummy* = 0 (pre 2007 period). Each of the probability outcomes is shown alongside its corresponding confidence interval, calculated at the 95% level.

The findings report that there is no evidence of an improvement in index scores after the implementation of AIM Rule 26 using the ordinal logit approach. However, there is some evidence at  $y=3$  that companies have a greater probability of scoring good governance after 2007, as zero does not lie in the confidence interval. Significance is at the 5% level but does not hold when  $y=4$  which is the highest level of governance compliance. These findings are, once again, consistent with the OLS regression and contradict the first hypothesis (1a) that governance compliance improved with the 2007 AIM regulation.

**Table 6.10 Predicting Change in Probability (before-after)**

	Probability when x=1	Probability when x=0	Predicted Change (1-0)	95% CI for Change
Panel A: Predicted change using Ordinal Logit model.				
Pr(y=1 x):	0.0892			[ 0.0509, 0.1275]
Pr(y=2 x):	0.3573			[ 0.2813, 0.4333]
Pr(y=3 x):	0.4509			[ 0.3752, 0.5266]
Pr(y=4 x):	0.1026			[ 0.0615, 0.1437]
Pr(y=1 x):		0.0747		[ 0.0409, 0.1086]
Pr(y=2 x):		0.3246		[ 0.2521, 0.3972]
Pr(y=3 x):		0.4788		[ 0.4100, 0.5477]
Pr(y=4 x):		0.1218		[ 0.0726, 0.1710]
Pr(y=1 x):			-0.0145	[-0.0623, 0.0332]
Pr(y=2 x):			-0.0326	[-0.1397, 0.0745]
Pr(y=3 x):			0.0279	[-0.0635, 0.1194]
Pr(y=4 x):			0.0192	[-0.0443, 0.0827]
Panel B: Predicted change using Ordinal Probit model.				
Pr(y=1 x):	0.0989			[ 0.0546, 0.1432]
Pr(y=2 x):	0.3625			[ 0.2890, 0.4360]
Pr(y=3 x):	0.4417			[ 0.4094, 0.4739]
Pr(y=4 x):	0.0970			[ 0.0539, 0.1401]
Pr(y=1 x):		0.0748		[ 0.0374, 0.1122]
Pr(y=2 x):		0.3265		[ 0.2549, 0.3981]
Pr(y=3 x):		0.4728		[ 0.4339, 0.5117]
Pr(y=4 x):		0.1259		[ 0.0730, 0.1789]
Pr(y=1 x):			-0.0241	[-0.0824, 0.0342]
Pr(y=2 x):			-0.0360	[-0.0379, -0.0341]
Pr(y=3 x):			0.0312	[ 0.0245, 0.0378]
Pr(y=4 x):			0.0289	[-0.0414, 0.0993]

Table provides the results for the predicted change in probability when comparing the before and after variable. All other variables are held at their means. The output shows that you have the probability of observing score 1-4 when x=1 (after) and the probability of the same observation when x=0 (before) then the difference in probabilities is calculated (after-before). In Panel A (ordinal logit) even though the probability of observing better corporate governance (score 3&4) is higher after 2007, it is not significant (zero lies within the confidence interval). However, there is evidence in Panel B (ordinal probit) of a significant increase in the probability of observing good governance (y=3) after 2007. Confidence Intervals calculated using delta method.

In addition to the examination above, this methodology has been used to undertake additional analysis on how the predicted probability is affected by changes in time and by Nomad reputation which will provide support for the other hypotheses. The results are displayed in *Table 6.11* and for brevity; only the ordinal logit results are reported here.

As the analysis for AIM Rule 26 was weak, an additional assessment has been undertaken to establish if there is a change in the governance score between 2006 and 2007. Here the predicted probabilities for 2007 are subtracted from those calculated

for 2006. Apart from ( $y=3$ ), the results are significant and suggest that governance increased in 2007, compared to 2006 (results in *Panel A*). However, given the previous analysis did not garner strong evidence to support hypothesis 1a, relating to how governance changes with the implementation of regulation, it does provide support for hypothesis 1b stating that there has been an observed increase in governance over time. This is also consistent with the findings in the OLS regression suggesting a convergence in governance standards as the market has grown more aware of the importance of governance issues, especially given the recent economic downturn.

The next set of analysis compares the probability changes in relation to Nomad reputation. Firstly, *Panel B* shows how the predicted probability changes when the companies are represented by a top-5 Nomad, compared with those who are not. The findings show that the change in probability is significantly negative for the likelihood of companies to have poor governance compliance ( $y=1&2$ ). This means that the companies not represented by a reputable Nomad are more likely to have lower governance. Similarly, the results indicate that companies are more likely have good governance scores ( $y=3&4$ ) when they are represented by a reputable Nomad, as shown by the significant difference in the change in probability. This analysis finds strong evidence supporting the third hypothesis that more reputable Nomads are associated with better performance.

Finally, *Panel C* documents the difference in the predicted probability when a company is represented by a NomadBro against those who are represented by Nomad-only firms.

However, unlike the results from the LS regression, there is no significant evidence to suggest that companies who provide dual Nomad and brokering services are associated with better governance. Therefore, in this instance, the result is inconsistent with that of Mallin and Ow-Yong (2008) so hypothesis 3b is rejected in favour of the null, and conclude that Nomad duality does not influence governance compliance, using ordinal logit methodology.

**Table 6.11 Predicting Change in Probability - Additional Analysis**

	Probability when x=2006	Probability when x=2007	Predicted Change (2006-2007)	95% CI for Change	
Panel A: Predicted change from Year 2006-2007.					
Pr(y=1 x):	0.0921			[0.0519,	0.1041]
Pr(y=2 x):	0.3552			[0.2748,	0.3752]
Pr(y=3 x):	0.4491			[0.4192,	0.5314]
Pr(y=4 x):	0.1036			[0.0876,	0.1558]
Pr(y=1 x):		0.0780		[0.0629,	0.1213]
Pr(y=2 x):		0.3250		[0.3019,	0.4084]
Pr(y=3 x):		0.4753		[0.3939,	0.5044]
Pr(y=4 x):		0.1217		[0.0733,	0.1339]
Pr(y=1 x):			0.0141	[0.0067,	0.0214]
Pr(y=2 x):			0.0302	[0.0145,	0.0458]
Pr(y=3 x):			-0.0262	[-0.0401,	-0.0122]
Pr(y=4 x):			-0.0181	[-0.0275,	-0.0086]
	Probability when x=1	Probability when x=0	Predicted Change (1- 0)	95% CI for Change	
Panel B: Predicted change for Top 5 Nomad					
Pr(y=1 x):	0.0612			[0.0280,	0.0944]
Pr(y=2 x):	0.2809			[0.1936,	0.3682]
Pr(y=3 x):	0.5055			[0.4334,	0.5775]
Pr(y=4 x):	0.1525			[0.0838,	0.2211]
Pr(y=1 x):		0.0917		[0.0617,	0.1217]
Pr(y=2 x):		0.3544		[0.2998,	0.4090]
Pr(y=3 x):		0.4499		[0.3934,	0.5063]
Pr(y=4 x):		0.1041		[0.0725,	0.1356]
Pr(y=1 x):			-0.0305	[-0.0646,	0.0036]
Pr(y=2 x):			-0.0735	[-0.1639,	0.0169]
Pr(y=3 x):			0.0556	[0.0035,	0.1147]
Pr(y=4 x):			0.0484	[0.0179,	0.1147]
	Probability when x=1	Probability when x=0	Predicted Change (1- 0)	95% CI for Change	
Panel C: Predicted change for Dual Nomad					
Pr(y=1 x):	0.0803			[0.0527,	0.1078]
Pr(y=2 x):	0.3302			[0.2772,	0.3832]
Pr(y=3 x):	0.4711			[0.4137,	0.5286]
Pr(y=4 x):	0.1184			[0.0837,	0.1532]
Pr(y=1 x):		0.1063		[0.0587,	0.1538]
Pr(y=2 x):		0.3805		[0.2998,	0.4613]
Pr(y=3 x):		0.4234		[0.3403,	0.5065]
Pr(y=4 x):		0.0897		[0.0487,	0.1308]
Pr(y=1 x):			-0.0260	[-0.0696,	0.0176]
Pr(y=2 x):			-0.0504	[-0.1268,	0.0261]
Pr(y=3 x):			0.0477	[-0.0305,	0.1259]
Pr(y=4 x):			0.0287	[-0.0133,	0.0707]

Table displays additional analysis using the changes in predicted probability. Panel A provides the results for the predicted change in probability in score between 2006 and 2007. This highlights whether there was a significant change in governance in the year of the regulation. Table shows significant evidence that there was a significant improvement in the probability of observing better governance in 2007 than in 2006. Panel B show the predicted change when companies have a more reputable Nomad. Reputable Nomad = 1, otherwise, zero. There is strong evidence supporting Nomad reputation. However, this does not hold for Panel C where the probability is calculated when the Nomad offers dual brokerage services. There is no evidence that Nomad duality is associated with better governance.

## 6.7 Conclusion

This chapter examines the level of corporate governance compliance with specific regard to regulation, company performance and the role of Nomads. In doing so, this study has taken the theory purported by Mallin and Ow-Yong (1998) and studied compliance empirically to assess how unregulated companies comply with pre-existing, but voluntary, standards. It was hypothesised that the adoption of AIM Rule 26 marked a major exchange intervention that made companies more visible, from inception, to their prospective shareholders. As such, with the market downturns and the increased awareness of governance issues around this time, it may have been expected that governance standards increased in companies listing post-2007. However, there is no empirical evidence to support this with either the OLS or ordered logit/probit regression analysis. Instead, there is significant evidence that compliance has increased over time rather than an event-specific turnaround.

Such advances in compliance may be attributed to the growing awareness of governance by market participants. Moreover, increasing pressure from stakeholders post the economic turndown, as well as their competitors listed on the more stringent Main Market, has led to a convergence in governance compliance. This is consistent with Di Maggio and Powell (1983); and Useem and Zelleke (2006) who document that external pressures encourage companies to behave in a certain way, leading to their behaviour converging. Another explanation may be that the AIM market in general, before 2007, was relatively new and the role of Nomads was still being established so there may have been less emphasis placed on monitoring and governance. However, as the market has grown, AIM companies are faced with pressure by shareholders,

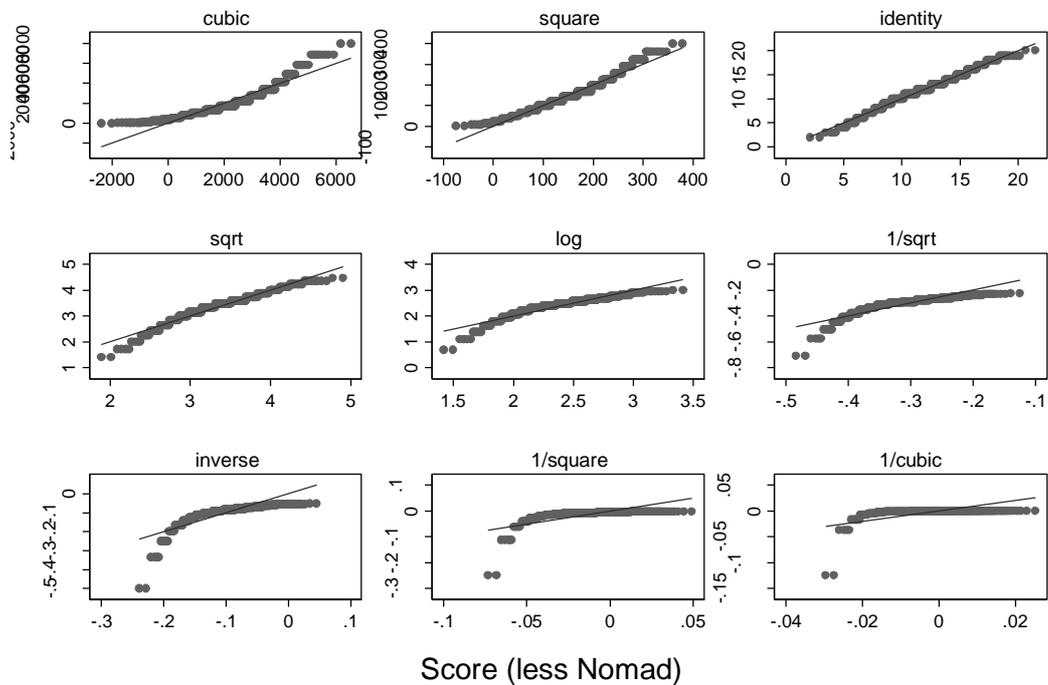
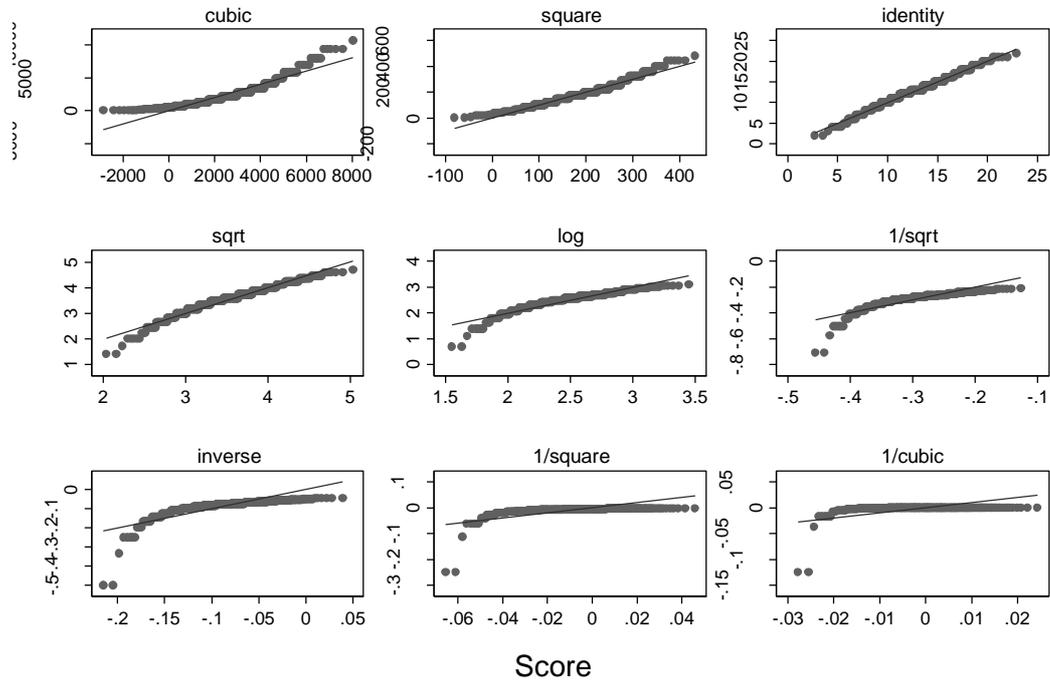
Main Market competitors, and even developments in AIM regulation. This leads to companies reporting information in the same way as companies listed on the Main Market.

The next hypothesis tested how governance is related to company size. AIM is a market targeted at SMEs and, as such, these companies may not be well placed to incur the costs associated with comprehensive governance compliance. Given this, the second hypothesis tested for a positive relation between company size and governance compliance. Regression analysis provided strong support for this hypothesis as *log asset* test significant at the 1% for all indices, although there is no statistical evidence regarding the *log market cap* variable. Furthermore, the ordinal regression analysis also provides strong support that log assets are positively related to compliance. This also supports the findings from Da Silva Rosa (2007); and Ragothaman and Gollakota (2009) that smaller companies are less well governed. Furthermore, the results are also consistent with the Mallin and Ow-Yong's (2012) study which reports that AIM companies level of QCA governance disclosure is positively associated with company size.

The next area of analysis concerns the role of Nomads and provides support to the hypothesis that Nomad reputation is positively associated with governance compliance. The OLS regression analysis found significant evidence that a top-15 ranked Nomad is associated with compliance, confirming *hypothesis 3a*. This is further supported by the results from the ordinal logit regression, which finds there is a significant probability of having better governance ( $Y=3&4$ ) when represented by a top-15 Nomad. However, this did not hold for analysis pertaining to dual Nomads.

Mallin and Ow-Yong (1998 and 2008) document that dual Nomads experience greater reputational risk when they provide additional brokering services, which leads them to encourage better governance or only accept clients with appropriate governance standards in place. There is no support for *hypothesis 3b* under least squares regression analysis. Similarly, there is no evidence under ordinal logit analysis that dual Nomads have a greater probability of being associated with better governance.

## APPENDIX 6.1 Transformation Plots



The graphs plot the various normality transformations when dealing with non-normality in relation to the dependent variables. The plot 'identity' is the untransformed plot and most represent normal distribution.

## APPENDIX 6.2      Definitions of Firm Performance Measures

### OPERATING PERFORMANCE

**Return on Equity** = Net income / book value on equity

*Datastream Code: WC08301*

**Return on Assets** = Net Income / total assets

*Datastream Code: WC01751/DWTA*

### VALUATION

**Tobin's Q** = (Equity Market value + liabilities market value) / (equity book value + liabilities book value)

*Datastream code = ((WC08001) + (WC03351)) / ((WC03501) + (WC03351))*

*Where,*

*WC08001 = market capitalization (annual)*

*MV = market value*

*WC03351 = total liabilities*

*WC03501 = common stock*

**Book to Market** = Book Value of Firm/Market Value of Firm

*Datastream code = 1/MTBV*

*Where,*

*MTBV = market-book ratio*

### **APPENDIX 6.3      Description of Variable Labels**

Score less Nomad = The corporate governance score minus the Nomad variables

Score = The corporate governance score with the Nomad variables included

Before/after dummy = AIM Rule 26 interaction (before=0, after=1)

Year = dummy for all years in sample

live/dead = dummy for whether company is still listed (no=0, yes=1)

log market cap = Log of Market Capitalisation

Tobin's q = Tobin's Q (method in Appendix 5.2)

ROA = Return on Assets

Log b/m = book-market-ratio

Top-15 Nomad = Nomads ranked in top 5 for reputation (using chapter four findings)

Dual nomad = Nomads who also provide dual Nomad and brokering services.

### 7.1 Introduction

#### 7.1.1 Agency Theory, Information Asymmetry, and Disclosure

This study provides evidence on the association between voluntary disclosures and a company's corporate governance structure. Corporate governance is the set of internal controls and policies that protect investors from management self-interest by encouraging managers to make value-maximising decisions and thus, mitigating the agency problem (Mitton, 2002; Denis and McConnell, 2003). Agency theory is the conflict that arises due to the separation of ownership and control when the owners' delegate works to the management, who then carry out the functions of that company (Shleifer and Vishny, 1997; Jensen and Meckling, 1976). However, problems arise from this separation such as, the two parties having different attitudes to risks or, more generally, the owners and the managers having different goals and objectives that lead to conflict between owners and managers (Eisenhardt, 1989). To give an example, a company's management may make decisions that are detrimental to the wealth of the company and its shareholders, causing a conflict of interest to arise between the two parties (Healy and Palepu, 2001).

Related to the agency problem is the idea that management holds more information about the company than its shareholders, leading to information asymmetries. Holmstrom (1979) states that the lack of information available to investors can also initiate the agency problem and companies that provide additional information to

shareholders reduce this problem. Taking steps to reduce such asymmetries benefits both manager and investor as it decreases the premium for handling this information risk, as well as lowering the cost of capital for management (Barry and Brown (1984, 1985) and Merton (1987). Voluntary disclosure is greatly influenced by the form of the ownership and management structure (Chau and Gray, 2002; Gelb, 2000; Ho and Wong, 2001). Jensen and Meckling (1976) assert that when ownership and control are separated, the potential for agency costs arises because of conflicts of interest between manager and shareholders. Under such circumstances, the demand for information is higher, and therefore, voluntary disclosures could be considered as a means of lowering information asymmetries and mitigating the agency problem. Kanagaretnam et al (2007) used bid-ask spreads around the announcement of quarterly earnings as a proxy for information asymmetry, alongside eight corporate governance variables, to ascertain the relationship between the quality of corporate governance and information asymmetry. The study finds significant evidence that higher levels of corporate governance are associated with lower information asymmetries between companies and investors. This is consistent with Ajinkya et al (2005) and Klein (2002) who find that companies with a more effective board have an enhanced quality and rate of information release. This, in turn, indicates that information asymmetries will be lower. The above evidence suggests that poor corporate governance leads to lower levels of disclosure and, in turn, large information asymmetries.

Previous findings have shown that information asymmetries are inherent to agency conflicts and both of these problems can be reduced, in part, by company disclosure. Corporate disclosures help bridge the gap between managers and investors as they

provide investors with additional information and protection regarding how their investment is being handled (Akhtaruddin et al, 2009). Disclosures, therefore, are central to a company's corporate governance structure (Baek et al, 2004). Karamanou and Vafeas (2005) find better corporate governance is associated with better quality disclosures. Studies also report that better disclosure reduces cost of capital (Botosan, 1997), lowers the cost of debt (Sengupta, 1998), and improves a company's stock performance (Healy et al, 1999; Mitton, 2002).

There are two main components to corporate disclosure, the first is mandatory disclosures. This is the obligatory disclosures that all companies are required to make and are set out by their markets regulatory body. The second is voluntary disclosures, which are the disclosures made by management over and above the mandatory requirement.

### **7.1.2 Voluntary Disclosure**

This study is concerned with voluntary disclosure strategies, specifically around the time of earnings announcements, and how these are associated with a company's corporate governance structure. Studies have documented several incentives for managers to increase the level of voluntary disclosure. Firstly, increased liquidity. Diamond and Verrecchia (1991), and Kim and Verrecchia (1994) both report that information asymmetries are reduced with greater levels of disclosure. This leads to more investor confidence regarding the price of stocks reflecting its fair value, which in turn, increases liquidity. This is corroborated by Welker (1995) and Healy et al (1999) who both report a positive relation between liquidity and analyst ratings disclosures. Another incentive for increasing voluntary disclosure is during periods

of stock overvaluation. Managers might at such times take steps to reduce the potential for litigation by signalling to the market that stocks are overvalued by increasing voluntary disclosure (Skinner, 1994).

Voluntary disclosure also serves to lower the cost of capital. As previously mentioned, voluntary disclosures lower information asymmetries between managers and markets participants. These voluntary disclosures should enable investors to make more reliable stock price valuations and therefore, reduce the information risk associated with that stock (Healy and Palepu, 2001). This is supported by Botosan and Plumlee (2002) who find a negative relation between analyst rankings of annual report disclosures, and the cost of capital. However, the study also reports that the cost of capital is positively related to rankings of quarterly disclosures.

Although there are several theoretical benefits through providing comprehensive voluntary disclosures, it can be a costly strategy. Not only can the act of publishing additional information be a cost burden, but also there are potentially considerable propriety costs involved. That is, detailed disclosure will provide and reveal potentially important information to competitors, which may not benefit the company and therefore can be a substantial cost associated with voluntary disclosure (Ellis et al, 2012; Verrecchia, 1983).

Finally, it has also been documented that managers voluntarily disclose bad news in order to realign shareholders expectations, which, in turn, improves investment efficiency. Kumar et al (2012) examines how capital allocation influences voluntary disclosure strategies when managers hold superior information regarding a

company's investment opportunities. They document that when disclosing bad news, the aforementioned increase in efficiency, gained through voluntary disclosure, outweighs any unfavourable effects in the stock price if they had not made the disclosure. This strategy of voluntarily disclosing bad news is supported by Skinner (1994) who finds that managers will disclose bad news early in order to avoid litigation costs. Myers and Majluf (1984) and Beyer and Guttman (2010) also report that voluntary disclosures are used as a strategy to increase a company's share price during periods when additional equity financing is required.

### **7.1.3 Voluntary Disclosure and AIM**

The literature relating to corporate disclosure has provided evidence of a link between the level of disclosure announcements and the quality of a company's corporate governance structure using agency and information asymmetry theories. However, very little research has been undertaken to examine the link when using voluntary rather than mandatory disclosures. Voluntary disclosures are important to corporate governance as these announcements indicate to shareholders the willingness of management to communicate additional information to its shareholders over and above the minimum requirements that are mandated by regulation. This, in turn, inspires confidence amongst investors that management are not expropriating shareholder funds.

This study examines the relation between the quality of a company's corporate governance structure and the level of voluntary disclosure made to test whether there is a significant difference in the level of voluntary disclosures when a company has a

quality corporate governance structure. It is the first study to examine voluntary disclosures on AIM, providing insight into how effectively managers communicate to shareholders on AIM given that there is so little regulatory encouragement to do so and great discretion with which they can do so. Furthermore, it is one of the few studies that examines pre-announcement disclosure as research has mainly concentrated in the voluntary disclosures found in a company's annual report.

The study also extends the theory into the role of Nomads by assessing how these external monitors impact on disclosure level/quality. Corporate Governance measures will include: board composition, Number of NEDs on board, ownership structure, split role of CEO/chair, the presence of an audit committee, features of the remuneration and nomination committees, and finally, the choice of Nomad.

As highlighted before, AIM companies are not required to formally follow the UK Corporate Governance Code or the QCA Guidance for Smaller Quoted Companies, which could lead to a wide disparity amongst companies when it comes to the quality of their corporate governance. If companies choose not to follow these codes then it would be expected that they would also choose not to communicate with their shareholders through voluntary disclosures. The AIM Rules for Companies (May 2014) Rules 10-17 establish the boundaries when it comes to disclosure<sup>14</sup>. Rule 10 states that where price sensitive information is going to be announced at a shareholder meeting, disclosure of that information must be made to ensure that the public is not notified later than those attending the meeting. Rule 11 sets out the general disclosure requirements for price sensitive information, which states that companies must

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<sup>14</sup> An outline of these rules can be found in Appendix 1.

disclose price sensitive information where there has been a change in its financial position/its sphere of activity/the performance of its business/the expectation of its performance. Additionally, companies must disclose substantial and related party transactions (Rule 12&13); notify the exchange when they engage in a reverse takeover and issue a new up-to-date admission document (Rule 14); and inform the exchange when there is a fundamental change in the business such as, the disposal/insolvency of the company (Rule 15). Companies must in addition keep up-to-date company information on a website (Rule 26).

Although AIM companies are encouraged to disclose the above information, the necessary level and detail of such disclosures are vague, open to interpretation, and leave much of the requirement to disclose, voluntary. Consequently, information asymmetries might arise in the AIM market given the lenient approach to disclosure requirements. The main rule of interest in this study is Rule 11, which relates to the timely disclosure of price sensitive information in regards to the company's financial position, activity and performance. This still leaves large scope for the use of voluntary disclosures as a means of indirectly communicating additional information to shareholders. This can be achieved through the use of notifications of accounts, preliminary earnings, trading statements, and notices of holdings in the company.

These items will be the main focus for analysis as the study concentrates on the pre-announcement period (when a company releases its final/interim accounts) and the disclosure of these items may relay some information to the shareholder. There may also be other voluntary/non-financial disclosures made within this period, such items may be firm or industry specific such as mining updates. However, all disclosures

will be analysed in the first instance, then repeated to omitting general voluntary disclosures. The pre-announcement period is defined as the time between a company's year-end or half-year end and the date of the actual announcement of the final/interim results. It is expected that companies with better governance will disclose more information to investors in this period. Finally, although not under the purview of the FCA, AIM companies are required to follow Section 5 (DTR-5) of the Disclosure and Transparency Rules which states that, firms must make monthly announcements declaring the total number of shares in issue in order to determine any major shareholdings<sup>15</sup>.

As well as the relation between corporate governance and information asymmetry, it is also of interest to examine whether there is a signalling effect with regard to pre-announcement disclosures. Therefore, an event study is undertaken to document the returns around the announcement period to see whether there is a relation between the level of voluntary disclosure and company performance. A comparison will also establish whether there is a difference between companies that make disclosures and those who do not. It might be expected that better governed companies make voluntary disclosures to signal information to shareholder about whether the results will contain good or bad news. Skinner (1994) examines earnings-related voluntary disclosures and finds that managers voluntarily disclose bad news as they face litigation by shareholders should they fail to notify shareholders of bad news on a timely basis, causing large stock price falls.

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<sup>15</sup> Found at: <http://fshandbook.info/FS/html/FCA/DTR/5>

Companies listing on AIM are also generally smaller than those listed on the main market and are more tightly held. This potentially means that their corporate governance system is different and potentially weaker given the costs involved for SMEs in implementing an appropriate system. Ragothaman and Gollakota (2009) study the effects of firm characteristics on corporate governance in the US and find that firm size is statistically significant and conclude that small companies are less well governed. Furthermore, Hermalin and Weisbach (2012) conclude that smaller companies have more lenient disclosure strategies compared to large companies.

Therefore, given the relaxed approach to regulation and the concentrated ownership experienced on AIM companies, there may be inherent agency problems and information asymmetries between management and shareholders. This leads to an opportunity to study a market where corporate governance is fundamental to protecting shareholders' interests, but its adoption is completely voluntary. Given this, there might be a connection between the quality of corporate governance structures, at company level, and the extent of voluntary disclosures that are not covered by the AIM Rules and the FCA disclosure directive. The previous chapter finds significant evidence that corporate governance compliance has increased over time, providing the opportunity to discover whether voluntary disclosure strategies have equally improved with time.

## **7.2 Literature Review and Development of Hypothesis**

Different measures of corporate governance will be used to determine the relationship between voluntary disclosure and different aspects of corporate governance. This will allow comparison between different types of governance and the level of voluntary disclosures made to establish whether certain categories play a greater role in company disclosure than others. The following discussion examines the roles of these corporate governance measures, referring to extant literature.

### **7.2.1 Board Composition**

The role of the directors is directly related to the corporate governance of the company as they monitor and discipline managers who fail to consider shareholder interests. Akhtaruddin et al (2009) state that board size is related to the level of disclosure given that it is the responsibility of the board of directors to set the level of disclosure. Their study examines different corporate governance measures comparing the level of voluntary disclosure made by a sample of Malaysian companies and finds a positive relationship between board size and voluntary disclosures. This is consistent with the finding from Chen and Jaggi (2000) and Birnbaum (1984) who both find that information asymmetries can be reduced by increasing board size. However, Cheng and Courtenay (2006) examine board composition and the extent of voluntary disclosures for a sample of companies listed on the Singapore stock exchange in the year 2000. They focus specifically on whether the extent of voluntary disclosure is influenced by the two different regulatory regimes: disclosure based regime or a merit based regime. Cheng and Courtenay (2006) state that, “*under a disclosure-based regulatory framework, market*

*participants are expected to determine the merits of a firm's actions whereas in a "merit-based" regulatory framework, regulators decide on the propriety of firm transactions".* The study finds no evidence that larger boards are associated with increased disclosure. In fact, the study supports the findings from Lipton and Lorsch (1992) and Jensen (1993) that when boards are too large, they have diffuse opinions and are unable to provide sufficient monitoring. Therefore, the literature pertaining to board size is inconclusive. However, given AIM is a market targeting SMEs, it might be assumed that there, boards are generally smaller so the first hypothesis supports the findings of Akhtaruddin et al (2009), that a greater proportion of directors on the board will result in a greater level of disclosure. Therefore, the first hypothesis is:

H1: Number of directors to the board is positively associated with voluntary disclosures.

### **7.2.2 Board Independence**

In addition to the size of the board, another important governance attribute is board independence. An independent board has a greater proportion of independent directors than executive directors. Fama (1980) states that independent directors are the principal monitors of management, charged with protecting the interests of shareholders. Fama and Jensen (1983) extend this supposition and state that independent boards have greater control of the management decision-making process than boards with a low proportion of outside directors. Pettigrew and McNulty (1995) find that NEDs are able to challenge strategies and decisions made by owner-managers who may not be acting in the best interests of other stakeholders.

Brunninge et al (2007) also find that weaknesses in management strategies can be overcome by employing more NEDs on the board. Similarly, Fiegener (2005) finds that presence of outside directors on the board is used to promote strategy development given that the owner-managers may not be competent to make such decisions. This is supported by Keck (1997) and Leonard and Sensiper (1998) who find that outside directors will have a wide variety of skills and expertise allowing them to make more informed strategic decisions. Johannisson and Huse (2000) also report that the presence of outside directors on the board enhances company reputation. Independent directors also have incentives to provide a more effective monitoring role, as they have to maintain their reputational capital in order to keep their place on the board, as well as maintain opportunities to gain future positions on other boards (Cheng and Courtenay, 2006).

With regards to board independence and voluntary disclosure, empirical evidence is limited. Ho and Wong (2001) use analyst perception as a measure of voluntary disclosure and do not find a significant relation between the level of voluntary disclosure and board independence. Eng and Mak (2003) find a significant and negative effect associated with the percentage of independent directors and the level of voluntary disclosure. Their findings show that greater numbers of outside directors on the board actually decreases the level of voluntary disclosures made. This is put down to a substitution effect whereby NEDs are appointed by blockholders who receive information about managers directly rather than through voluntary public disclosure. Similarly, Gul and Leung (2002) report a significant negative relation between voluntary disclosures and the percentage of NEDs (using multiple board memberships as a proxy). However, Forker (1992) states that NEDs monitor the

quality of disclosure more effectively but do not examine the level of such disclosure. Chen and Jaggi (2000) examine both voluntary and mandatory disclosures and conclude that they are both positively associated with the proportion of NEDs on the board. Similarly, Cheng and Courtenay (2006) find a significantly positive relation between board independence and the level of voluntary disclosure, this association being two to three times stronger under the disclosure-based regulatory regime. These findings are supported by Akhtaruddin et al (2009) who examine voluntary disclosures found in the annual reports of 110 Malaysian companies. The study documents significant evidence that voluntary discourse is positively related to board independence. Evidence surrounding the effect of board independence in increasing a company's transparency by way of voluntary disclosure is mixed, but more recent literature does provide intuitive and empirical evidence of a positive association. AIM companies only specifically highlight/refer to non-executive directors (NEDs) in the admission document which does not guarantee their complete independence. However, NEDs are outside directors and as the Corporate Governance code and QCA guidelines require independent directors, NEDs will be used as a proxy for board independence. Therefore, the second hypothesis is:

H2: Percentage of NEDs is positively related to voluntary disclosures.

Related to the theory of board independence, is CEO duality. This is an important aspect in relation to corporate governance as duality may distort board independence as well as reducing the effectiveness and capability of the board to effectively monitor and controlling management (Jensen, 1993; Khanchel, 2007). In addition, this may reduce the quality and quantities of the information disclosed and further exacerbate

the agency problem, by increasing information asymmetries (Li et al 2008). This suggests that CEO duality reduces the board's ability to effectively control management, which consequently lowers the level of disclosure. Empirical results support the above evidence and report a significant negative relationship between CEO duality and voluntary disclosure (Gul and Leung, 2004; Donnelly and Mulcahy, 2008). However, in other studies the results for duality are not significant as in Ho and Wong (2001) and Cheng and Courtenay (2006). Given the AIM already has limited disclosure requirements, obstructions such as CEO duality may impede the quantity and quality of voluntary disclosures made. Therefore, an extension to board independence, hypothesis 2b proposes:

H2b: CEO Duality is negatively related to the level of voluntary disclosure.

### **7.2.3 Gender Diversity**

With regards to gender diversity and level of company disclosure, Gul et al (2011) study the role of female directors and the level of corporate disclosure in US companies. They find that more gender diverse boards are associated with a greater level of disclosure as diversity enhances transparency and the accuracy of financial reports. This is corroborated by Barako et al (2008) who document that a higher presence of females and independent directors on the board is positively related to the level of CSR disclosure, for Kenyan banks. Similarly, Prado-Lorenzo and Garcia-Sanchez (2010) find that gender diversity changes board behaviour in a way that increases transparency in relation to sustainability reporting. In relation to UK markets, Cai et al (2006) study market efficiency for 144 companies listed on the LSE and find that gender diversity on the board results in less information asymmetry in

the market. However, Nalikka (2009) studies gender roles and the extent of voluntary disclosure made in the annual reports for Finnish companies. The study finds no significant relation between the presence of women and the volume of voluntary disclosures. Furthermore, Hambrick et al (1996) states that gender diversity can have a divisive impact on the board, that can suppress the decision making purpose of the board, negatively affecting board functionality. To date, there has been very little research into gender roles and their association with voluntary disclosures, and the previous study found no relation between gender diversity and governance compliance. However, there is an argument that as voluntary disclosures are influenced by the monitoring of the company, and as Adams and Ferreira (2009) document that women provide a more effective monitoring role within the board, it might be expected that their presence on AIM companies will increase voluntary disclosures. Therefore, the next hypothesis is:

H3: Percentage of female directors on the board is positively associated with voluntary disclosures.

#### **7.2.4 The Audit Committee**

The audit committee's main responsibility is to oversee and monitor the financial reporting process, ensuring transparency by mediating between the external auditor, the internal auditors, managers and directors (Saibaba and Ansari, 2011). These responsibilities are discussed in detail in the previous chapter. This present study is concerned with the transparency roles the audit committee has, as this will directly influence the level of voluntary disclosures. With regard to corporate governance and disclosure, Ho and Wong (2001) find that the presence of an audit committee is

significantly and positively related to the level of voluntary disclosure, while the proportion of family members on the board is negatively related to voluntary disclosures. Similarly, Forker (1992) studies the quality of share option disclosure in financial statements and finds that the monitoring role supplied by the audit committee reduces agency costs by enhancing the quality of disclosures made by management. However, the findings by Akhtaruddin et al (2009) reveal that the quality of the members on the audit committee is more influential than the number of members. Given this, there will be two hypotheses to test the importance of the audit committee in regard to both size and experience. The next set of hypotheses is therefore:

H4a: The presence of a director with accounting experience on the audit committee will be positively related to voluntary disclosure.

H4b: The size and presence of an audit committee will be positively related to voluntary disclosure.

### **7.2.5 Remuneration Committee**

The previous chapter has already noted the importance of the remuneration committee in limiting the ability of management to expropriate funds by awarding themselves inflated salaries Vafeas (2003). However, there is very little theoretical or empirical analysis on how the remuneration committee influences the level of voluntary disclosures (if at all), and no prior study has examined the importance of this variable individually.

Beekes and Brown (2006) study the association between the quality of a company's corporate governance and the informativeness of its disclosures. The measure of informativeness includes: number of disclosures, analysts' forecasts, and the timeliness of disclosures. The study finds that better governed companies supply more informative disclosures. However, the quality of corporate governance is measured using an index (similar to the one used in the previous chapter) and as such it cannot be determined how the remuneration committee variable affected the outcome in regards to disclosure.

These findings are similar to those of Ho et al (2008) who document a positive relation between corporate governance and the level of voluntary disclosure, using a sample of Malaysian listed companies from 1996-2001. However, once again, the remuneration committee variable is subsumed into a corporate governance index. There is therefore an opportunity to discover whether the remuneration committee provides an additional monitoring role with regards to the level of voluntary disclosures.

The presence of remuneration might not intuitively affect the level of disclosure but a committee that only engages non-executive directors indicates a better-governed and monitored company and therefore one that might be more likely to reduce information asymmetries through voluntary disclosure. Therefore the next hypotheses will be:

H5a: The presence of a remuneration committee is positively associated with disclosures.

H5b: Remuneration committees with solely NEDs on the board is positively associated with voluntary disclosure.

### **7.2.6 Nomination Committee**

The nomination committee is another potential corporate governance attribute associated with voluntary disclosures. As mentioned in section 3.8 of the previous chapter, the nomination committee is tasked with considering the size, structure and composition of the board. The nomination committee plays an important role in companies with a presence of large controlling shareholders, since it can provide minority shareholders with the opportunity to support a nominee (Jensen 1993; Shivdasani and Yermack 1999). This might be particularly applicable on AIM where the percentage of shares being issued is relatively small and there is no regulatory minimum requirement with regard to the percentage of shares being issued<sup>16</sup>. The effectiveness of this committee to appoint directors who are appropriate monitors and/or with the suitable experience will determine the success of the board. This will then have a direct effect on how the board motivates and monitors its managers to reduce information asymmetries. Therefore, the presence and structure of the nomination committee can contribute to the effectiveness of the monitoring process carried out by the board (Vafeas, 2000). As with the remuneration committee, there is no extant literature relating to this possible association directly, but the variable is included, as part of a governance index, in a limited number of studies.

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<sup>16</sup> Table 3 in the previous chapter corroborates the claim that AIM companies have relatively small issues, as the mean issue size was 37.68%.

Allegrini and Greco (2013) study the voluntary disclosures made in 177 annual statements from Italian listed companies. They combine the audit, remuneration and nominating committees to create one integrated committee variable. However, there is no significant evidence to suggest that the committees are associated with the level of voluntary disclosure. Similarly, Cerbioni and Parbonetti (2007) examine the association between corporate governance and the level of voluntary intellectual capital disclosure using European biotechnology firms. Once again the three main board sub-committees are integrated to form one variable. Consistent with Allegrini and Greco (2013), there is no evidence supporting the relation between the nomination committee and the level of voluntary disclosures. In fact the results are significantly negative, which the authors suggest could be owed to a substitution effect between corporate governance and disclosure. Finally, O'Sullivan et al (2008) examine governance in relation to forward-looking disclosure information such as, the earnings forecasts found in the annual reports of Australian listed companies. In contrast to the previous findings, there is a significantly positive relation between the 'committee' variable and the level of the voluntary disclosure.

The evidence surrounding the importance of the nomination committee in influencing a company's disclosure policy is mixed. However, given AIM is associated with concentrated ownership, the nominating committee could be an important feature, especially for the minority, allowing shareholders to influence and support the appointment of independent directors. It is therefore important to consider this variable separate to the other committee variables, unlike in previous studies, to determine the relative and particular effect of board sub-committees in determining

the level of voluntary disclosure. The hypothesis relating to the nominating committee is:

H6: An independent nominating committee is positively associated with voluntary disclosure.

### **7.2.7 Ownership Structure**

Jensen and Meckling (1976) posit that when there is a separation of ownership and control, conflict of interest between the two groups leads to agency costs. In such circumstances, monitoring becomes more important along with the disclosure of information to protect the interests of shareholders. Hossain et al (1994) assert that when a company's shares are more widely held, the level of disclosure is higher. These findings are consistent with Chau and Gray (2002) who find a positive relationship between voluntary disclosure and diffuse ownership. However, Berle and Means (1932) suggests that companies with dispersed ownership experience less corporate monitoring. This implies a negative relation between ownership and voluntary disclosure. Coffee (1999) states that companies wishing to expand and remain competitive will adopt higher corporate governance standards than other companies listed on the main US markets. The study suggests that companies with concentrated ownership will voluntarily disclose information to their shareholders. Lakhil (2005) studies the relationship between corporate governance attributes and voluntary disclosures of French firms. The paper finds that disclosures increase when the company has a less concentrated ownership structure suggesting that better corporate governance leads to greater frequency of voluntary disclosures. Similarly, La Porta et al (2000) find that dispersed ownership is more commonly found

alongside better quality corporate governance. The theory reported by La Porta et al (2000) and Chau and Gray (2002) suggests a negative relation between ownership concentration and voluntary disclosure. Additionally, Coffee (1999) indicates that this might not be the case and that global competition will lead to companies with concentrated ownership acting in much the same way as those companies with dispersed ownership.

The observations presented above provide mixed evidence regarding ownership concentration. However, it is intuitive to hypothesise that tightly held issuing companies, who are not listing on AIM to raise additional capital, might not have the same incentives to have comprehensive disclosure policies as they have no need to provide the wider market with additional information. From the admission document data collection block-holder are not always disclosed, the only comparable variable is the percentage of shares that are being admitted to the market. Given AIM companies are generally SMEs; they are likely to be tightly held ownership structures. This study will use the % of shares being issued as a proxy of ownership concentration. Therefore the next hypothesis is:

H7: % of shares available is negatively related to voluntary disclosure.

#### **7.2.8 The Choice of Nomad**

As well as the aforementioned corporate governance measure, this study is also concerned with extending the research into the role of Nomads by examining their

relation to voluntary disclosure levels. Given Nomads provide a monitoring and advisory role to ensure that companies comply with the AIM rules, it might also be expected that this role can influence a company's disclosure policy. Fan and Wong (2005) state that management might employ an external intermediary with the reputation to provide guarantees to investors that the company is credible. Such assurances then reduce any existing agency costs. Mallin and Ow-Yong (2012) conducted interviews with AIM managers and Nomads and discovered that companies relied on their Nomad for corporate governance advice, while Nomads often decided whether to accept a client based on the quality of their corporate governance structure. However, when this was empirically investigated, Mallin and Ow-Yong (2012) found no evidence that Nomad duality is significantly related to the corporate governance compliance of AIM listed companies.

This study hypothesises that more reputable Nomads (top-15 Nomads) will encourage the companies they represent to disclose more information voluntarily given their primary monitoring function. In addition to this, the assertion that Dual Nomads are better monitors, due to their increased reputational risk, is also analysed in relation with the extent of voluntary disclosures. Therefore, the eighth hypotheses assert that:

H8a: Companies that employ a top-15 Nomad are positively associated with company disclosure.

H8b: Companies that employ a Dual Nomad are positively associated with company disclosure.

### **7.2.9 Auditor Quality**

External auditors are tasked with monitoring managerial behaviour on behalf of a firm's stakeholders. The positive relation between the audit process and the quality of corporate governance is reinforced by the quality of the auditor (Yeoh and Jubb 2001). Audit firm size has been well documented to have a positive influence on the level of corporate disclosure (Owusu-Ansah, 1998; Eng and Mak, 2003; Ntim et al, 2012) as well as the quality of the audit itself (DeAngelo, 1981). This is attributed to these larger audit firms having greater expertise, experience, and knowledge of their roles and responsibilities (DeAngelo, 1981; Haniffa and Cooke, 2002). This, in turn, enhances their independence and ability to mitigate any unscrupulous pursuits of managers.

Previous studies (Ahmed and Nicholls, 1994; Wallace and Naser, 1995) provide further evidence that the type of audit firm and the level of disclosure are positively related. More recently, O'Sullivan et al (2008) examine how the appointment of a Big-6 audit firm is associated with the level of disclosure. They find a significantly positive relation that Big-6 auditors voluntarily disclose more information in their annual report. Given that AIM is largely compiled of SMEs, it might be suggested that the cost burden associated with hiring of a Big-4 auditor might be an indicator of quality. This would then suggest that these companies would adopt better disclosure policies. Therefore the ninth hypothesis will be:

H9: Companies who appoint a Big-4 auditor will be positively associated with voluntary disclosure levels.

### **7.2.10 Control Variables**

Prior literature identifies a number of additional factors that could influence the level of voluntary disclosures. The control variables that are included in the model are: firm size (Hossain et al, 1994), firm performance (Meek et al, 1995), and industry sector (Meek et al, 1995). In addition, previous disclosure studies indicate that a positive association exists between voluntary disclosure and firm size (Lang and Lundholm, 1993; Hossain et al, 1994; Kent and Ung, 2003). Similarly, Cox (1987) and Choon et al, (2000) state that larger firms are also more likely to publish earnings forecasts than smaller firms. Studies also report the relation between leverage and disclosure. Voluntary disclosure can mitigate information asymmetry, decreasing the borrower's risk of default, which in turn, reduces the cost of capital (Baiman and Verrecchia, 1996; Sengupta, 1998). However, empirical analysis produces mixed results as Craswell and Taylor (1992) and Hossain et al (1994) find the association between leverage and disclosure to be non-significant while Meek et al (1995) document a significant negative relation. The final variable will be bid-ask spread to control for liquidity.

### **7.2.12 Summary of Literature**

The table below presents a summary of the above literature with the corresponding sign in relation to voluntary disclosure. Furthermore, the expected sign hoped to be achieved in this study is provided in the final column.

**Table 7.1 Summary of Literature Review**

	Experienced Sign	Expected Sign
<b><u>Board Composition</u></b>		
Akhtaruddin et al (2009)	+ve	
Chen and Jaggi (2000)	+ve	
Birnbaum (1984)	+ve	+ve
Cheng and Courtenay (2006)	+ve	
Lipton and Lorsch (1992)	-ve	
Jensen (1993)	-ve	
<b><u>Board Independence</u></b>		
Ho and Wong (2001)	No Evidence	
Eng and Mak's (2003)	-ve	
Gul and Leung (2002)	-ve	
Chen and Jaggi (2000)	+ve	+ve
Cheng and Courtenay (2006)	+ve	
Akhtaruddin et al (2009)	+ve	
<b><u>CEO Duality</u></b>		
Gul and Leung (2004)	-ve	
Donnelly and Mulcahy (2008)	-ve	-ve
Ho and Wong (2001)	No Evidence	
Cheng & Courtenay (2006).	No Evidence	
<b><u>Gender Diversity</u></b>		
Barako and Brown (2008)	+ve	
Prado-Lorenzo and Garcia-Sanchez (2010)	+ve	+ve/-ve
Gul et al (2011)	+ve	
Nalikka (2011)	No Evidence	
<b><u>The Audit Committee</u></b>		
Ho and Wong (2001)	+ve	
Forker (1992)	+ve	+ve
Akhtaruddin et al (2009)	No Evidence	
<b><u>Remuneration Committee</u></b>		
Beekes and Brown (2006)	+ve*	+ve
Barako (2008)	+ve*	
<b><u>Nomination Committee</u></b>		
Allegrini and Greco (2013)	No Evidence*	
Cerbioni and Parbonetti (2007)	No Evidence*	+ve/-ve
O'Sullivan et al (2008)	+ve*	
<b><u>% Shares Issues</u></b>		
Hossain (1994)	+ve	
Chau and Gray (2002)	+ve	
Berle and Means (1932)	-ve	+ve
Coffee (1999)	-ve	
La Porta et al (2000)	+ve	
<b><u>Nomad Reputation</u></b>		
Mallin and Ow-Yong (2009)	+ve	+ve/-ve
Mallin and Ow-Yong (2012)	No Evidence	
<b><u>Auditor Quality</u></b>		
Owusu-Ansah, 1998	+ve	
Eng and Mak, 2003	+ve	
Ntim et al (2012)	+ve	
Ahmed and Nicholls (1994)	+ve	+ve
Wallace and Naser (1995)	+ve	
O'Sullivan et al (2008)	+ve	
Haniffa and Cooke (2002)	+ve	

The table lists the corporate governance indicators used in this study along with the relevant literature supporting its inclusion. The second column provides the sign experienced in relation to the level of voluntary disclosures; the third column provides the sign expected to be found in this study. (+ve) is a positive relation, and (-ve) is a negative relation. \* denotes items not directly examined but rather combined as part of a governance index.

### 7.3 Data

The sample consists of 200 of the most recently listed companies used in the previous sample<sup>17</sup>. This incorporates a period from 2006-2012. As this study is not concerned with how disclosure level has changed over time, this stratified sample instead consists of the most up-to-date data sample that incorporates pre-post economic crisis data. Although this gives rise to questions surrounding selection bias, this sample allowed for more complete data collection as older companies, over the course of the entire study, have been observed more cancellations.

In order to measure the level of voluntary disclosure, all voluntary pre-announcements disclosures are collected between each company's year-end/half-year-end and the time the actual results are announced. Schedule 5, in *Appendix 6.1*, states the boundaries for disclosures, which apply to pre-announcement. Therefore, voluntary disclosures include: Notification of Results, trading updates, managerial changes, quarterly earnings announcements, awards, operational updates, and general non-financial news announcements. The window for issuing voluntary announcements is large, although as the pre-announcement window starts from a company's year-end, then it is appropriate to examine all announcement made during this period. Analysis later in this study will examine specific pre-announcements of the Notification of Results, which is more directly associated with the actual final/interim results.

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<sup>17</sup> Sample size based on timeliness to hand-collect the data.

AIM companies have a six-month window in which to report their final results and a three-month window for their interim results<sup>18</sup>. This is considerably longer than the four (two) months allowed to Main Market listed companies to publish their final (interim) reports<sup>19</sup>. This gives firms a long window to issue voluntary disclosures such as “Notification of Results” and trading statements, to reduce the impact of the actual announcement, especially where this announcement is expected to contain bad news (Soffer et al, 2000). This data is gathered from the London Stock Exchange Regulatory News Service (RNS) through NexisUK. Any missing data was checked against the RNS announcement stored on the company’s own website. All other data and control variables such as, gearing, market cap, total assets and operating performance measures are gathered using DataStream.

In addition to the voluntary disclosures, the corporate governance attributes discussed in the previous section are also collated. While the previous study examined the level of compliance, this study focuses on the actual structure of these governance variables. Therefore, the raw data from the previous section’s data collection will be used as a basis for analysis. That is, instead of requiring a minimum board size of four, the actual size of the board for each company will be used. Furthermore, to guarantee the accuracy of these governance variables in relation to voluntary disclosure, the data will only include final and interim results for the company’s first year of incorporation, as the governance variables are collected from the admission document. Any reported change in director where this change affects the board composition is amended accordingly (that is, if the independence or gender diversity

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<sup>18</sup> AIM rule 18 and 19.

<sup>19</sup> <http://www.londonstockexchange.com/companies-and-advisors/main-market/documents/brochures/main-market-continuing-obligations.pdf>

variables are affected). Finally, as the role of Nomads is also being further investigated, any announcement of a Nomad switch is also documented and the reputation ranking updated.

Unlike previous studies that focus on voluntary disclosures in the annual reports, this study is concerned with new announcement published in the pre-announcement period leading up to the final/interim results publication. Furthermore, there is no judgement made on whether the disclosure contains positive or negative news as this form of content analysis would inevitably involve subjective judgements. This is reported as the main limitation of this type of methodology (Healy and Palepu 2001, p. 427). Instead, two indices are created; one to include the total number of voluntary pre-earnings disclosures made, and another that removes general disclosure that may be firm/industry specific and skew the results even after controlling for industry sector. For example, Oil and Gas entities make ‘drilling’ and ‘mining’ updates, which other industries understandably do not issue. However, although no judgement is made about the type of the content in the announcement, the second part of this study will determine what the market infers from certain types of announcements by examining the market reaction to the publication of a *Notice of Results*.

*Table 7.2* describes the voluntary disclosure collected for the indices. Panel A lists the different types of voluntary disclosures collated from the data collection. General disclosures, which include mining updates and operational aspect of the company, are the prime voluntary disclosures made. However, it is worth noting that general disclosure such as mining and drilling updates are industry specific. The final two rows in *panel A* report the number of voluntary disclosures made and the total number

of disclosures made and shows that there are over 1,000 more mandatory disclosure made over the sample period indicating that voluntary disclosures are underutilised as a form of communication.

The panel B reports the number of firm observations over the different industry sectors and years. Basic Material is the most represented industry and Utilities the worst, with only 8 observations. Furthermore, there are only 13 and 16 observations of the years 2009 and 2012, respectively. *Panel C* documents the distribution of the Notification of Results and Trading Statement disclosures made over the year-end and half-year end pre-announcement period. These are important voluntary disclosures as they are the only two that directly correspond to the actual earnings announcement. The panel reports that there are more trading statements made than notice of results but also highlights that these trading statements occur more frequently preceding the final earnings announcement.

**Table 7.2 Distribution of Voluntary Disclosure**

	Obs.	Min	Max	Mean	Median	SD	
Panel A: Distribution of Disclosures							
Notification of Results (NOR)	89	0	2	1.00	1	0.15	
Trading Statements	92	0	4	1.03	1	0.32	
Operations Updates	22	0	3	1.29	1	0.69	
Quarterly Earnings	5	0	2	1.67	2	0.58	
Managerial Changes	18	0	2	1.06	1	0.24	
Awards	4	0	2	1.33	1	0.58	
General Disclosures	577	0	12	1.39	2	1.80	
Total Voluntary Score	807	0	17	3.88	3	3.01	
<i>Total Disclosure (vol+man)</i>	<i>1851</i>	<i>0</i>	<i>27</i>	<i>5.11</i>	<i>4</i>	<i>4.38</i>	
Panel B: Sample Distribution by Industry and year							
BMATR	34	OILGS	28	2006	36	2010	35
CNSMG	18	TECNO	27	2007	34	2011	33
CNSMS	24	TELCM	12	2008	33	2012	16
HLTHC	21	UTILS	8	2009	13		
INDUS	28						
Panel C: NOR and Trading Statement Observations							
	YES	NO	Y/E Obs	H/YE Obs			
Notification of Results	89	311	44	45			
Trading Statements	92	308	56	36			

Table display the descriptive stats from the data collection. Panel A details the observations across the different types of voluntary disclosure. Panel B lists the firm observations over industry sector and year. Finally, Panel C provides the distribution of the main earnings announcement over combined sample, year-end sample (YE), and Interim results (HYE). The Score in Italics is represents the total number of per-announcement disclosures: voluntary + mandatory.

Finally, given the number of independent variables and controls it is necessary to generate a correlation matrix to provide univariate relationships between the variable and test for the presence of potential multicollinearity. The results are presented in *Table 7.3*. For the year-end index (VIndexYE), the strongest relationships occur between the nomination committee (+ve), Nomad Duality (-ve) and year (+ve). For the interim index (VIndexHYE), the strongest results are CEO duality (-ve), and log market capital (+ve). Finally, none of the coefficients indicate the presence of mulitcolinearity.

**Table 7.3 Correlation Matrix for Independent Variables**

	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	
a VIndex YE	1.000																						
b VIndex HYE	0.254	1.000																					
c Total No on Board	-0.079	-0.046	1.000																				
d Gender Diversity	-0.094	-0.024	0.271	1.000																			
e Board Independence	0.000	-0.016	0.120	0.053	1.000																		
f CEO Duality	-0.070	-0.114	0.138	0.026	0.085	1.000																	
g Audit Committee Size	-0.020	-0.051	0.435	0.091	0.197	0.162	1.000																
h Accounting Expert	0.026	0.032	0.093	-0.072	0.148	-0.019	0.176	1.000															
i NEDs on Remuneration	-0.044	-0.091	0.252	0.006	0.330	0.154	0.187	0.151	1.000														
j Nomination Committee	0.203	0.096	0.236	0.156	0.013	-0.071	0.140	0.026	0.130	1.000													
k % Share Issue	-0.013	-0.016	0.022	0.031	0.044	0.067	0.156	0.061	0.136	0.004	1.000												
l Top-15 Nomad	-0.030	-0.027	0.140	0.000	-0.067	-0.071	0.085	-0.032	0.078	0.133	0.080	1.000											
m Nomad Duality	-0.187	-0.053	0.018	0.008	0.024	-0.001	0.011	-0.092	-0.081	0.097	-0.015	0.287	1.000										
n Tobin's Q	0.028	-0.010	-0.102	0.017	-0.058	-0.245	-0.049	-0.080	-0.127	-0.031	0.000	0.012	-0.074	1.000									
o Big-4 Auditor	0.030	-0.055	0.139	-0.007	0.011	-0.129	0.064	0.045	0.057	0.157	-0.024	0.242	0.104	-0.061	1.000								
p Log Market Cap	-0.004	0.157	0.187	-0.004	-0.014	-0.006	0.035	0.207	0.073	0.225	0.008	0.051	0.035	0.108	0.199	1.000							
q ROA	-0.009	0.047	0.086	0.043	-0.074	-0.004	0.019	0.004	-0.010	0.054	-0.102	-0.113	-0.015	-0.247	0.089	0.160	1.000						
r Gearing	0.035	-0.056	-0.006	-0.021	0.085	0.001	0.005	0.051	0.077	0.147	0.069	-0.052	0.044	0.020	0.137	0.056	-0.029	1.000					
s Year	0.164	-0.020	-0.065	-0.046	0.001	-0.040	-0.007	-0.032	-0.097	0.068	-0.021	-0.010	0.081	0.074	0.024	0.044	-0.046	-0.101	1.000				
t Industry Codes	0.121	0.084	0.094	0.051	0.002	-0.035	0.100	-0.106	0.110	0.110	0.062	-0.022	0.016	0.076	0.062	0.173	-0.044	0.128	-0.060	1.000			
u CAR (-1, +1)	-0.009	0.010	-0.021	-0.041	-0.109	0.020	0.063	0.042	-0.126	0.103	0.074	-0.059	0.040	0.186	-0.048	0.118	0.013	-0.011	0.016	0.083	1.000		
v Information Asymmetry	0.020	0.010	-0.015	-0.025	-0.153	0.036	0.072	0.010	-0.153	0.110	0.048	-0.053	0.015	0.174	-0.054	0.126	0.017	-0.013	0.032	0.075	0.176	1.000	

Table provides spearman correlation matrix for the independent variables and the two voluntary disclosure indices. VIndex YE is the voluntary pre-announcement disclosure made around the final earnings announcement, VIndex HYE is the disclosure made in the period preceding the interim results announcement. The letters depicting the variable in the title row correspond to the matching letter and variable on the vertical title axis.

*Table 7.4* provides the descriptive statistics for the independent variables in the regression analysis. The statistics provided are the average, standard deviation, minimum observation and maximum observation for all variables. The main issues to note at this point is that gearing and Tobin's Q have high standard deviations due to being not normally distributed. However, attempts at transformations did not improve the distribution enough to warrant doing so. Therefore, as these variables are not well specified, regression analysis is undertaken by systematically removing these two variables for robustness.

**Table 7.4 Descriptive Statistics for Independent Variables**

	Obs	Mean	Std. Dev.	Min	Max
VIndex YE	199	2.176	2.016	0	14
Vindex HYE	199	1.814	1.673	0	9
Total No on Board	199	5.317	1.469	2	10
Gender Diversity	199	0.236	0.481	0	2
Board Independence	199	0.653	0.477	0	1
CEO Duality	199	0.925	0.265	0	1
Audit Committee Size	183	2.443	0.708	0	5
Accounting Expert	182	0.780	0.428	0	2
NEDs on Remuneration	198	0.712	0.526	0	3
Nomination Committee	199	0.342	0.475	0	1
% Share Issue	199	0.513	0.501	0	1
Top-15 Nomad	199	0.372	0.485	0	1
Nomad Duality	199	0.799	0.402	0	1
Tobin's Q	196	1.016	3.928	-5.849	32.498
Big-4 Auditor	199	0.286	0.453	0	1
Log Market Cap	197	9.868	1.442	4.616	13.889
ROA	198	-0.251	1.167	-14.675	0.971
Gearing	187	0.900	4.980	-11.473	54.12
Year	199	2008	1.924	2006	2012
Industry Codes	199	4.397	1.376	1	9
CAR (-1, +1)	196	0.370	1.212	-0.137	72.963
Information Asymmetry	196	0.276	0.145	3.89e-07	2.000

Table provides the descriptive statistics for the independent variables alongside the two VIndex dependent variable denoting pre-announcements disclosures made for the final results announcements (VIndex YE), and the disclosure made preceding the interim announcement (VIndex HYE). Obs is the number of observations.

### 7.3 Methodology (Part I)

The first analysis undertaken will be to establish the relation between the level of voluntary disclosures, through the *VIndex*, and individual corporate governance attributes. To do this, LS regression is performed. The model is presented below. It should be noted that all the following equations that refer to a regressions to be tested will be referred to by their model number. The corresponding *Table 7.5* describes all the variables used in each of the regression models, as well as the expected sign to be generated after the regression is employed.

#### Model 1

$$VIndex = \beta_1 \text{ Total Board} + \beta_2 \text{ Gender Diversity} + \beta_3 \text{ Board Independence} + \beta_4 \text{ CEO duality} + \beta_5 \text{ Audit committee Size} + \beta_6 \text{ Accounting expert} + \beta_7 \text{ Solely Neds} + \beta_8 \text{ Nomination committee} + \beta_9 \text{ Ownership} + \beta_{10} \text{ Top-15 Nomad} + \beta_{11} \text{ Nomad Duality} + \beta_{12} \text{ Tobin's Q} + \beta_{13} \text{ Big-4 Auditor} + \beta_{14} \text{ Log Market Cap} + \beta_{15} \text{ ROA} + \beta_{16} \text{ Gearing} + \beta_{17} \text{ Year} + \beta_{18} \text{ Industry} + \beta_{19} \text{ Live/Dead} + \varepsilon \quad (7.1)$$

**Table 7.5 Description of Variables and Relationship in LS Regression**

Variable Labels	Variable Description	Exptd. Sign
VIndex	Voluntary disclosure index.	Index
$\beta_1$ Total Board	The total number of directors on the board.	+
$\beta_2$ Gender Diversity	The total number of females (if any) on Board.	+
$\beta_3$ Board Independence	A greater proportion of NEDs on the board.	+
$\beta_4$ CEO duality	The combined role of CEO and chair (1=split, 0=dual)	-
$\beta_5$ Audit committee Size	The number or directors assigned to the audit committee.	+
$\beta_6$ Accounting expert	Whether there is an accounting expert on the audit committee.	+
$\beta_7$ Solely Neds	Whether there are solely NEDs on the remuneration committee.	+
$\beta_8$ Nomination committee	Whether the nomination committee is constructed by a majority of independent directors (1= yes, 0= no).	+
$\beta_9$ Ownership	Minimum share issue of 25%	+
$\beta_{10}$ Top-15 Nomad	1 if Nomad is a Top-15 Nomad, 0 otherwise. Measures Nomad Reputation.	+
$\beta_{11}$ Nomad Duality	1 if Nomad also acts as Broker, 0 otherwise. Measures Nomad Reputation.	+
$\beta_{12}$ Tobin's Q		+
$\beta_{13}$ Big-4 Auditor	1 if auditor is Big-4, 0 if otherwise.	+
$\beta_{14}$ Market Cap	Market Capitalisation controls for company size.	+
$\beta_{15}$ ROA	Return on Assets to control for performance	+
$\beta_{16}$ Gearing	Total Liabilities to Total Assets	+
$\beta_{17}$ Year	Year dummy to show whether disclosure has changed over time.	+
$\beta_{18}$ Industry	Industry dummy.	+/-
$\beta_{19}$ Live/Dead	Live company dummy. 1=company is still listed, 0= company is dead.	+
$\beta_{20}$ CAR(-1,+1)	Cumulative abnormal Return for three-day period around announcement.	+/-
$\beta_{21}$ Info Asymmetry	Standard deviation of the three-day abnormal returns	-
$\beta_{22}$ VIndex	Voluntary disclosure index.	Index

The table provides a list of the variables in the OLS regression, along with a description of each variable and its expected relationship with the voluntary disclosure index in the OLS regression model. VIndex is the dependent variable and  $\beta_1 - \beta_{22}$  are the independent variables. NB in *model 3*, information asymmetry is  $\beta_{21}$ .

In addition to how corporate governance attributes influence the extent of voluntary disclosure, an examination of stock market returns is also performed. This indicates whether managers choose to release good news or bad news voluntarily, as a way to avoid price shocks and potential litigation (Skinner, 1994). To do this, cumulative abnormal returns are analysed over the period the earnings announcement is made.

Similar to chapter four, market model parameters are used and measured over a 100-day estimation period prior to each announcement. The abnormal returns (AR) are then estimated for the period (-1, 0, +1). Where -1 is one day before the announcement, 0 is the event date and, +1 is one day after the announcement date. This three day holding period return reduces event day uncertainty in observations where the announcement may have been made on a non-trading days. This might be particularly problematic for voluntary news announcements, especially general news announcements, that may not be made during trading hours. The abnormal returns are calculated using the following equation:

$$AR_{it} = R_{it} - [\alpha + \beta R_{mt}] \quad (7.2)$$

Where,  $AR_{it}$  is the abnormal returns of the company  $i$  at time  $t$ ,  $R_{it}$  is the returns of the company  $i$  at time  $t$ ,  $R_{mt}$  is the realised return on the market index (FTSE ALLSHARE), and  $\alpha$  and  $\beta$  are the regression equation parameters. To help control for thin trading, the  $\beta$  is adjusted using the Scholes and Williams (1977) method (detailed in 5.4.2). As in section 6.4.2, the  $R_{it}$  and  $R_{mt}$  is adjusted for the risk-free rate of return, using UK T-bills and converting the annual figure into daily trading risk by assuming 250 trading days per year. From here the average abnormal return is calculated which aggregates the abnormal returns for all observations to find the

average abnormal return at each time  $t$ . This helps eliminate idiosyncrasies in measurement.

The CAR is then calculated by taking a sum of the abnormal returns for each company from day-1 through to day+1 as shown in the following equation:

$$CAR_{i(-1,+1)} = \sum_{t=-1}^{t=1} AR_{i(-1,+1)} \quad (7.3)$$

With the CARs calculated, the model is now repeated with the addition of stock price performance. The model is presented below. As disclosure should be the driver of ex-post CAR, CAR (01, +1) is the dependent variable in the next analysis. Once again, a description of the variable is provided in *Table 7.5*.

### Model 2

$$\begin{aligned} CAR(-1,+1) + \varepsilon = & \beta_1 \text{ Total Board} + \beta_2 \text{ Gender Diversity} + \beta_3 \text{ Board Independence} \\ & + \beta_4 \text{ CEO duality} + \beta_5 \text{ Audit committee Size} + \beta_6 \text{ Accounting expert} + \beta_7 \text{ Solely Neds} \\ & + \beta_8 \text{ Nomination committee} + \beta_9 \text{ Ownership} + \beta_{10} \text{ Top-15 Nomad} + \beta_{11} \text{ Nomad} \\ & \text{Duality} + \beta_{12} \text{ Tobin's Q} + \beta_{13} \text{ Big-4 Auditor} + \beta_{14} \text{ Log Market Cap} + \beta_{15} \text{ ROA} + \beta_{16} \\ & \text{Gearing} + \beta_{17} \text{ Year} + \beta_{18} \text{ Industry} + \beta_{19} \text{ Live/Dead} \\ & + \beta_{19} VIndex + \varepsilon \end{aligned} \quad (7.4)$$

The next examination incorporates the effects voluntary disclosures have on information asymmetries. It has been well documented that voluntary disclosures increases communication between managers and shareholders and therefore, reduce information asymmetries. To measure information asymmetry, the method stipulated by Dierkins (1991) is used. This method uses the volatility around abnormal returns as a proxy for information asymmetry. This is calculated using the standard deviation

of the three-day abnormal returns around the final/interim results announcement date. The market-adjusted abnormal returns are used as a basis for this method (as in project one) and are also adjusted for thin trading under the Scholes and Williamson method. A strong positive/negative reaction around the announcement date will indicate the presence of information asymmetry (Krishnaswami and Subramaniam, 1999; Moeller et al, 2007). This measure is then incorporated into the LS regression and is shown in *Model 3*. However, given that information asymmetry should encourage managers to mitigate the agency problem through increased disclosure, it is the asymmetry that should drive the level of disclosure, and is the dependent variable in this next model. Furthermore, *Model 4* incorporates both the abnormal returns and information asymmetry proxy to the model.

### Model 3

$$\begin{aligned} \text{Information Asymmetry} = & \beta_1 \text{ Total Board} + \beta_2 \text{ Gender Diversity} + \beta_3 \text{ Board} \\ & \text{Independence} + \beta_4 \text{ CEO duality} + \beta_5 \text{ Audit committee Size} + \beta_6 \text{ Accounting expert} + \\ & \beta_7 \text{ Solely Neds} + \beta_8 \text{ Nomination committee} + \beta_9 \text{ Ownership} + \beta_{10} \text{ Top-15 Nomad} + \\ & \beta_{11} \text{ Nomad Duality} + \beta_{12} \text{ Tobin's Q} + \beta_{13} \text{ Big-4 Auditor} + \beta_{10} \text{ Top-15 Nomad} + \beta_{11} \\ & \text{Nomad Duality} + \beta_{12} \text{ Tobin's Q} + \beta_{13} \text{ Big-4 Auditor} + \beta_{14} \text{ Log Market Cap} + \beta_{15} \\ & \text{ROA} + \beta_{16} \text{ Gearing} + \beta_{17} \text{ Year} + \beta_{18} \text{ Industry} + \beta_{19} \text{ Live/Dead} \\ & + \beta_{19} \text{VIndex} + \varepsilon \end{aligned} \tag{7.5}$$

### Model 4

$$\begin{aligned} \text{VIndex} = & \beta_1 \text{ Total Board} + \beta_2 \text{ Gender Diversity} + \beta_3 \text{ Board Independence} + \beta_4 \\ & \text{CEO duality} + \beta_5 \text{ Audit committee Size} + \beta_6 \text{ Accounting expert} + \beta_7 \text{ Solely Neds} + \\ & \beta_8 \text{ Nomination committee} + \beta_9 \text{ Ownership} + \beta_{10} \text{ Top-15 Nomad} + \beta_{11} \text{ Nomad} \\ & \text{Duality} + \beta_{12} \text{ Tobin's Q} + \beta_{13} \text{ Big-4 Auditor} + \beta_{14} \text{ Log Market Cap} + \beta_{15} \text{ ROA} + \beta_{16} \\ & \text{Gearing} + \beta_{17} \text{ Year} + \beta_{18} \text{ Industry} + \beta_{19} \text{ Live/Dead} + \beta_{20} \text{ CAR}(-1,+1) + \beta_{21} \\ & \text{Information Asymmetry} + \varepsilon \end{aligned} \tag{7.6}$$

The final part of the regression analysis examines voluntary disclosures that directly correspond to earnings. To do this, only *notification of results (NOR)* and *trading statements* are analysed, and information asymmetry and the CAR are the dependent variables. Binary variables are included in the independent variable to represent companies that only issue NORs and those that only issue trading statement, or those who issue both. The other independent variables described in models 1-4 remain the same. This analysis will determine how disclosure affects information asymmetries and the abnormal returns earned at the time of the actual earnings announcement.

#### **7.4. Data Analysis (Part I)**

The first part of this analysis examines how corporate governance attributes affect the level of voluntary disclosure using *Models 1-4* detailed in the section above. Models 1 and 4 test corporate governance attributes in relation to the voluntary disclosure index. However, the only significant results are *Gender Diversity*, which is negative at the 5% level. This suggests that the presence of women on boards negatively impacts on the level of voluntary disclosure. This is also contrary to extant literature from Berako and Brown (2008) and Gul et al (2011). There is also a positive relation between voluntary disclosure and the presence of the *Nomination Committee*. Although the results in relation to corporate governance attributes are limited, there is evidence supporting the sixth hypothesis relating to the nomination committee. Overall these findings indicate that governance attributes are not the main driver to voluntary disclosure as, with the exception of hypotheses two and six, all others have to be rejected.

*Model 2* is related to the abnormal returns earned around the time of the actual earnings announcement and whether corporate governance attributes and the level of voluntary disclosure drive them. The only significant result here is, CEO duality. This suggests that governance is a driver of the abnormal returns earned through the split role of the CEO and chair. However, there is no significant finding for any other governance attribute and there is also no significance relating to the level of voluntary disclosure.

*Model 3* examines the relation between the level of voluntary disclosure and information asymmetries, using the standard deviation of the abnormal returns over

the announcement period (-1, +1) as a proxy. As before, there is only one significant finding in this analysis, that of Nomad reputation. There is a weak (1%) negative relation between a reputable Nomad and the level of information asymmetry. This highlights that Nomads play a governance role that help mitigate the agency problem, by having a negative impact of the issue of information asymmetry. To provide further confidence in the Models 2&3, the Durbin and Wu-Hausman are performed in order to test for endogeneity between the dependent and independent variables. The scores are shown below. The null hypothesis for these tests is that the variables are exogenous. Therefore, in both models, we cannot reject the null and, therefore, the variables are not endogenous.

Model 2

Robust score chi2(1) = .089733 (p = 0.7645)  
 Robust regression F (1,112) = .075347 (p = 0.7842)

Model 3

Robust score chi2(1) = .40041 (p = 0.5269)  
 Robust regression F (1,113) = .342791 (p = 0.5594)

Finally, there is no significance among the control variables used in this analysis. The results for the LS regression for voluntary disclosure around interim earnings results are presented in *Appendix 7.2*. The results for this analysis are weaker than the year-end results as no governance variable is associated with the level of voluntary disclosure. However, the findings suggest the company size is influential as this result is significantly positive. In addition, gearing and Tobin's Q, despite have large standard deviations, did not improve the regression model when removed. Therefore, is still presented in the results below.

**Table 7.6 Regression Analysis for YE Voluntary Disclosure**

	VIndex	CAR	Information Asymmetry	Vindex (combined)
Big-4 auditor	-0.0702 (-0.19)	-0.0375 (-0.77)	-0.0257 (-0.75)	-0.149 (-0.37)

Total number of directors	-0.225 (-1.15)	-0.0180 (-1.03)	-0.0101 (-0.80)	-0.234 (-1.17)
Number of NEDs	0.335 (1.26)	0.0301 (1.20)	0.0443 (0.42)	0.337 (1.25)
Board independence	0.113 (0.21)	-0.00121 (-0.18)	-0.0586 (-1.13)	0.0812 (0.15)
CEO duality	-0.902 (-0.82)	0.0131** (2.41)	0.0520 (0.97)	-0.918 (-0.82)
Gender diversity	-0.655** (-2.08)	-0.0101 (-1.21)	-0.0182 (-0.58)	-0.732** (-2.19)
Audit committee total	-0.340 (-1.28)	-0.0362 (-0.10)	0.0255 (0.96)	-0.306 (-1.13)
Present accounting expert	-0.258 (-0.67)	0.0309 (0.42)	0.0105 (0.44)	-0.248 (-0.61)
Solely NEDs on remuneration	-0.470 (-0.79)	0.00291 (0.65)	-0.0559 (-1.21)	-0.503 (-0.82)
Nomination committee	0.0977** (-2.51)	0.0130 (-0.19)	0.0598 (-1.09)	0.104** (-2.58)
Share issue	-0.0561 (-0.09)	-0.0112 (-0.94)	0.153 (1.19)	0.0230 (0.03)
Top-15 nomad	0.122 (0.32)	0.0827 (0.18)	-0.0388 (-1.91)*	0.129 (0.33)
Dual nomad	-0.728* (-1.70)	0.00195 (0.28)	0.0400 (1.00)	-0.738* (-1.66)
Tobins Q	0.0245 (1.42)	0.0232 (0.92)	0.305 (0.79)	0.0212 (1.23)
Log market cap	-0.0788 (-0.69)	-0.0727 (-0.35)	0.0198 (1.14)	-0.0679 (-0.57)
ROA	0.0342 (0.27)	-0.00721 (-1.15)	0.00272 (0.63)	0.0429 (0.35)
Gearing	0.0222 (1.23)	0.0178 (1.20)	-0.0126 (-1.02)	0.0221 (1.23)
Year	0.0953 (1.24)	-0.0474 (-0.54)	0.00199 (0.63)	0.0918 (1.18)
Live/dead	-0.166 (-0.31)	0.0164 (0.27)	0.0222 (0.59)	-0.146 (-0.26)
Industry	0.0957 (1.27)	-0.00472 (-0.57)	0.00268 (0.70)	0.0987 (1.32)
VIndex		-0.0413 (-0.33)	-0.0485 (-0.80)	
CAR				-2.206 (-0.28)
Info asymmetry				0.0267 (0.00)
_cons	-184.8 (-1.19)	0.975 (0.55)	-4.212 (-0.66)	-177.9 (-1.14)
<i>N</i>	136	134	135	134
<i>R</i> <sup>2</sup>	0.192	0.088	0.174	0.197
adj. <i>R</i> <sup>2</sup>	0.051	-0.083	0.021	0.038
F	2.351	0.705	0.271	2.264
df_m	20	21	21	22
df_r	115	112	113	111

Table displays the regression coefficients and the corresponding test statistic for models 1-4 for the voluntary disclosures made around a company's final results. \*, \*\*, \*\*\* denotes significance at 10%, 5% and 1%, respectively.

#### 7.4.1 Multinomial Regression Analysis

The final part of this analysis examines the choice companies make when considering whether to disclose trading statements, notification of results, or both. These two disclosures are the key earnings pre-announcements as they are the only two that specifically refer to the actual earnings of the company. This next analysis uses multinomial logit regression to examine how the independent variable affects the choice of choosing on both these voluntary disclosures. Multinomial logistic regression is useful in situations where the dependent variable is nominal but cannot be ordered. This model also assumes that the dependent variable is not perfectly predicted from the independent variable in any of the outcomes. Furthermore, there is no need for the independent variables to be independent from each other. Its application and interpretation is similar to logistic regression but with nominal rather than binary outcomes (Long and Freese, 2006). This analysis also requires a base against which to test. In this study the alternative outcome is the choice to publish none of these disclosures.

The results are documented in *Table 7.7* and use the same independent variables as the LS regression analysis. The significant findings from this analysis are all positive. Therefore, with regard to notice of results only, there is a positive relation between % *share issue* and voluntary disclosure. That is, there is a significant probability that as the diffuse ownership increases, the multinomial log-odds for preferring to voluntarily disclose *Notice of Results* over the choice not to disclose any information increases by 1.28 (holding all other variable in the model constant). Similarly, there is also support that as information asymmetry increases the choice of preferring to voluntarily disclose notices of results increases compared to the alternative not to disclose any

information. This indicates that companies may issue voluntary disclosures to reduce the adverse effects of information asymmetries.

With regard to trading statements, there is only documented support for Nomad reputation. There is significant evidence that as Nomad reputation increases, there is greater probability of companies choosing to issue trading statements over the alternative to not disclose any information. The remaining results in trading statements are the same as the choice to issue both types of voluntary disclosure, so will be discussed together. The results from ROA are significant, which supports the LS regressions and indicates that as companies perform better they are more likely to make voluntary earnings announcements. Although the findings for corporate governance are, once again, limited there is support for the 7<sup>th</sup> hypothesis and the finding from Chau and Gray (2002), and Hossain et al (1994) that diffuse ownership is positively related to the level of earnings disclosures. Finally, there is also support for hypothesis 8a that Nomad reputation is positively associated with voluntary disclosure, although this finding is limited to trading statements and does not hold under LS regression analysis.

**Table 7.7 Multinomial Model for Pre-announcements**

	Notice of Results only	Trading Statement Only	Both
Total number of directors	-0.241 (-1.00)	0.306 (1.40)	-0.297 (-0.86)
Board independence	0.825 (1.17)	0.145 (0.24)	1.318 (1.26)
CEO duality	-0.460 (-0.34)	-0.285 (-0.25)	0.122 (0.08)
Gender diversity	-0.345 (-0.52)	0.449 (0.89)	0.543 (0.69)
Audit committee	0.305 (0.66)	-0.653 (-1.44)	-0.782 (-1.02)
Present accounting expert	0.0315 (0.05)	0.483 (0.70)	0.243 (0.24)
Solely NEDs on remuneration	0.953 (1.52)	0.178 (0.29)	0.259 (0.28)
Nomination Committee	0.864 (1.46)	-0.0117 (-0.02)	0.545 (0.63)
% Share issue	1.285** (2.10)	0.0492 (0.09)	0.639 (0.81)
Top-15 nomad	-0.204 (-0.32)	1.353** (2.27)	0.658 (0.76)
Dual nomad	0.482 (0.67)	0.460 (0.60)	1.453 (1.14)
Tobin's q	-0.24 (-1.41)	-0.136 (-0.74)	-0.29 (-0.91)
Big-4 auditor	0.568 (0.88)	-0.0835 (-0.14)	-0.783 (-0.82)
Log market cap	0.328 (1.26)	0.047 (0.20)	0.0246 (0.07)
ROA	0.57 (0.81)	2.468** (2.03)	4.938** (2.00)
Gearing	-0.0662 (-0.79)	-0.0445 (-0.37)	0.108 (0.80)
Year	-0.123 (-0.89)	0.177 (1.21)	0.181 (0.87)
Industry	0.108 (0.88)	0.240** (2.07)	0.682*** (3.44)
CAR	-9.299 (-0.76)	-12.58 (-0.92)	10.74 (0.68)
Info asymmetry	14.40* (1.67)	-2.314 (-0.21)	17.60 (1.29)
_cons	242.0 (0.88)	-361.7 (-1.22)	-371.6 (-0.89)

$Chi^2 = 92.44$

Prob > chi2 = 0.0092

Pseudo R2 = 0.2607

P = 0.00923

Table displays the results from the multinomial regression analysis. The base for this analysis is the choice not to disclose either notification of results or trading statements. *t* statistics in parentheses (\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ )

## **7.5 Methodology (Part II)**

With the relation between voluntary disclosures, corporate governance and performance now established, this section will examine whether these disclosures are used as a management strategy such as a signal of good or bad news. Soffer et al (2000) reports that managers pre-announce nearly all bad news, and only release around half of good news. This supports the theory that managers utilise disclosure strategies to avoid negative earnings surprises and, in turn, a negative market reaction. This is supported by Libby and Tan (1999) who examine the relation between earnings pre-announcements and analyst forecasts. They find that when managers with bad news conceal part of this information, this leads to greater negative market reaction at the earnings announcement date. This in turn leads to analyst's forecasts of subsequent earnings to be lower than if they had pre-released all the bad news. This evidence implies that managers can use voluntary disclosures to signal information to shareholders, which lowers earnings shocks and limits negative market reactions around the actual earnings announcement. Furthermore in doing so, even though the pre-announcements contain negative news, information asymmetries will be reduced.

As AIM companies are given considerable discretion and time to release their final/interim results, it is difficult to specify how these disclosures are directly disclosed with the earnings results in mind. However, the disclosure of a 'notification of results' announcement is different, and directly corresponds to the earnings announcement, even more so than trading statements, which can be made throughout the year. Therefore, an event study is performed to see whether managers issue this

notice as a means of signalling information to shareholders and, in turn, reduces information asymmetry.

In this section, three years of final and interim results are documented: the first year corresponds to the data used in the previous sections plus an additional two firm years. The addition of these further firm years is necessary in order to increase the sample size and to get stock price information of the companies once they are more developed, and not suffering from potential thin-trading. An event study is appropriate and is often used to investigate firm performance around the time of companies' financial results, as in Cheng Fan Fah (2006) and Chen et al (2005) where both studies examined the effect timing had on firm performance. Using the market model to calculate the abnormal returns of these firms, the results are then grouped into different event windows to capture returns before and after the date of the actual announcement to examine whether firm performance is affected by the disclosures, and to compare these results with the performance of companies that do not pre-announce the date of their earnings announcement. In addition, the market model previously presented will be repeated to document the market reaction to the notification as well as the abnormal returns earned when the actual announcement is made. Scholes and Williams (1977)  $\beta$  adjusted method (detailed in 5.4.2) is used to control for thin trading.

Alongside the documented average abnormal returns (AR) and cumulative average abnormal returns (CAR). Armitage's (1995) study into different event study methods finds performance of the LS market model is enhanced when the abnormal returns are standardised by the regression's standard errors. The standard error is calculated by dividing each share's abnormal return (AR) by the standard error of the regression (S),

which generates the standard error from which t-tests can be carried out<sup>20</sup>. Corrado (1989) and Corrado and Zivney's (1992) rank test will also be performed as a robustness check.

To allow analysis of performance and suitable comparisons to be undertaken, the sample must be grouped into two portfolios using the *Notification of Results* (NORS). One portfolio will contain the companies that pre-release their announcement date, and the other the companies that do not release this information. This will allow analysis to be carried out to determine if there is a significant difference between the returns earned on the two portfolios once the actual results are released. There is also further analysis for the disclosure-only portfolio. This allows the abnormal returns to be studied around the date of the actual notification to see whether investors interpret the voluntary pre-announcement as a signal for potential good/bad news in the up-coming earnings announcement. It is expected that, suggested by Soffer et al (2000) and Skinner (1994), the market perceives this voluntary pre-announcement as a signal of bad news and react negatively the day the notification of the results date is made.

*Table 7.8* displays the descriptive statistics for the event study. Around a quarter of all companies, per year, make a notification of results. This relatively small number of observations is slightly higher for interim results, excluding the third year of observations. It should be noted that there is a reduced number of observations in the third year, as the interim year-end date had only just passed at the time of the data collection. The lower part of the table provides the distribution over the sample period. 2006 is the first year of admission documents used in this study and therefore, has

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<sup>20</sup> In-depth detail of this methodology is provided in 5.4.2.

relatively fewer observations as the earnings announcement for that year was generally made in 2007.

**Table 7.8 Descriptive Statistics for Event Study**

	Y1	Y2	Y3	HYE1	HYE2	HYE2
NOR	43	39	44	45	45	37
No NOR	157	161	156	155	155	152
% NOR	26.22%	23.21%	26.99%	27.78%	27.78%	21.76%
By Year	YE Total Obs	YE NOR	%	HYE Total Obs	HYE NOR	%
2006	10	2	20.00%	16	4	25.00%
2007	43	11	25.58%	50	8	16.00%
2008	79	16	20.25%	122	34	27.87%
2009	95	22	22.45%	61	12	19.67%
2010	85	21	24.71%	105	23	21.90%
2011	97	17	17.53%	92	20	21.74%
2012	85	15	17.65%	77	12	15.58%
2013	72	18	25.00%	39	8	20.51%
2014	34	4	11.76%	27	5	18.52%
Total	600	126	20.90%	589	126	21.39%

Table displays the descriptive statistics for the event study analysis. The top section provides detail of the number of notification of results made over the extended three-year sample period, alongside the number of companies who did not pre-release their announcement date. The third row details the percentage of Notices in relation to sample total. The lower part of the table provides the distribution of observations over the companies' year-end/half year-end date.

## 7.6 Data analysis (Part II)

The literature has highlighted key differences regarding the performance of firms surrounding firm disclosures. Collett (2004) suggested that firms are more likely to disclose bad news, suggesting that pre-announcements are more likely to lead to negative abnormal returns; while Skinner (1994) states that firms disclose bad news in order to avoid litigation. Conversely, Miller (2005) finds no evidence that disclosures lead to a negative reaction. Therefore, this section provides evidence for abnormal returns earned around earnings announcement as well as the time the voluntary disclosure is made.

The first analysis in this section examines the abnormal returns earned around the actual earnings announcement. This is separated into two portfolios; one containing companies who pre-released the date of their results (with NOR) and another containing those who did not (without NOR). This split is carried out separately for year-end and interim results, as the pre-announcement is two months shorter for interim result so disclosure strategies may be different. The results are documented in *Table 7.9*. The first column displays the results for the CAR and its associated test statistic. The remaining columns document the corresponding test statistic, the standardised test statistic, the rank test statistic, and the results from the AAR analysis. Furthermore, it should be noted that this examination required the removal of several observations due to thin trading, potentially owed to year one on this analysis also being their first year on the market.

Panels A and C contain the findings for the voluntary disclosure companies. The abnormal returns are negative in the announcement windows and significantly so in the t-test and standardised scores (not the rank test). The abnormal returns remain significantly negative in the post-announcement window. This provides support support the theory put forward by Soffer et al (2000), and Skinner (1994) that managers pre-disclose bad news in order to avoid large earnings losses once the earnings announcement is released. Although a strategy utilised by managers to control earnings shocks, the evidence also supports the theory that voluntary disclosure reduces information asymmetry as abnormal returns on either side of the announcement is more significant than the actual earnings announcement, suggesting

the news contained within it was not a surprise. However, without the additional confirmation from the rank test, these findings are not entirely robust.

Panels B and D display the results for the companies that did not issue a notification of results to the market. For the interim observations, companies are underperforming prior to the release of the final results. Both pre-event windows, (20, -3) and (-20, +7), for the interim results, are negative and significantly so at 1% for the (-20, +7) window under the standardised t-test. However, this does not hold after robustness checks and the ordinary t-test. The results then become positive from the event window, though not significantly so. This suggests there was good news contained in the final results, but the reaction was delayed. Furthermore, the results indicate a more positive response to the earnings announcement for the final results (panel B). The results are positive over all event windows and significant at 5% for the pre-announcement windows, suggesting these companies were already performing well prior to the release of the interim earnings announcement. The earnings surprise at the event window is opposite to the findings for the disclosure companies, further indicating that voluntary disclosure reduces information asymmetry. Overall, the findings in this section support prior literature and indicate that the use of voluntary disclosure can be used as a signal of future earnings as well as a means to reduce information asymmetries in the market.

**Table 7.9 Abnormal Returns around Earnings Announcement**

	CAR	T-Stat	St-test	Rank	AR	T-Stat
Panel A: With NOR YE (N=108)						
(-20, -3)	1.43%	3.15***	2.18	-1.71*	-0.13%	-1.25
(-20, 7)	-0.53%	-0.97	-0.43	-2.66**	-0.02%	-0.18
(0,0)	-0.64%	-6.22*	-9.44**	-1.02	-0.64%	-6.22*
(-1, +1)	-1.06%	-5.95***	-6.45**	-0.19	-0.35%	-3.44*
(0, +7)	-1.39%	-4.79	-5.42**	-1.43	-0.17%	-1.69
Panel B: Without NOR YE (N=437)						
(-20, -3)	3.64%	4.64**	5.12***	0.87	0.26%	1.54
(-20, 7)	4.07%	4.50**	2.23*	-1.36	0.15%	0.85
(0,0)	0.49%	2.89	5.12*	0.98	0.49%	2.89
(-1, +1)	0.89%	2.74*	3.29*	-0.10	0.27%	1.58
(0, +7)	0.53%	1.09	3.30**	0.72	0.07%	0.39
Panel C: with NOR HYE (N=112)						
(-20, -3)	3.42%	0.14	4.46***	-1.64	-0.05%	-0.04
(-20, 7)	2.20%	0.08	4.85***	2.66**	0.08%	0.01
(0,0)	-0.21%	-0.04	-10.06**	-1.07	-0.21%	-0.04
(-1, +1)	-0.82%	-0.09	-8.34**	0.33	-0.27%	-0.05
(0, +7)	-0.43%	-0.93	-3.22*	-0.78	-0.05%	-0.01
Panel D: Without NOR HYE (N=371)						
(-20, -3)	5.57%	0.10	-2.81**	-1.02	0.43%	0.03
(-20, 7)	5.29%	0.08	-4.42***	-1.59	0.19%	0.02
(0,0)	0.26%	0.02	0.11	-0.99	0.06%	0.02
(-1, +1)	0.58%	0.03	0.63	0.17	0.19%	0.02
(0, +7)	-0.26%	-0.01	0.82	-0.85	0.26%	-0.01

Table displays the CAR and AR alongside their associated t-stats for companies who pre-announce the date of their results and another portfolio of firms who do not. This is done for final and interim results. \* \*\* \*\*\* indicates statistical significance at the 10%, 5% and 1% level respectively. N represents the number of observations for each panel, NOR is the abbreviation for *Notice of Results* announcements. The analysis is carried out over five different event windows, 0 being the announcement date. St-test is the standardised test statistic and rank is the Corrado (1989) non-parametric rank test.

The analysis of abnormal returns has revealed thus far that, around the release of interim and final results, the market reacts negatively to companies who pre-release prior to the date of their announcement but positively for those firms who did not pre-disclose this information. This indicates that firms who publish “Notification of Results” do so as a signal of future bad news/underperformance. Additionally, such a signal also serves to reduce the impact of a future negative earnings announcement so the company does not experience a reaction as suggested by Soffer et al (2000).

In order to make the link between negative returns and pre-announcements more cohesive, it is now necessary to assess firm performance around the actual date the notification is made. The results are displayed in *Table 7.10*.

The findings from this final analysis shows that for both final and interim pre-announcement disclosures, companies were experiencing significant positive abnormal returns in the pre-event window which turns negative after the release of the *Notice of Results*. For the standardised test statistic, the event window has weak significance at the 5% level and post-event window at 1% for the interim results. Furthermore, the significantly positive pre-announcement window is observed in the non-parametric rank test. There is statistical significance supporting a negative market reaction to the notices for the final results for the t-test and St-test but this is not corroborated by the rank test for the (0,0) event window. The post-event also provides strong evidence of a negative reaction to the voluntary disclosure. Given the significant positive returns these companies were experiencing prior to the pre-announcement, which changed to being negative, and significantly so in the days following the announcement, the findings suggest that shareholders do infer bad news

on the announcement of a notice of results, even if there is no performance related detail contained within the notification itself. This might be down to shareholders not anticipating such a notice, as relatively few companies make such pre-announcements, and thus viewing the announcement as a form of earnings warning, and a signal of bad news, which in turn results in shareholders selling their shares and depressing the share price. However, there is not robust evidence supporting these findings for the interim results posted in Panel B, as the rank test is not statistically significant in any event window.

These findings therefore support the use of voluntary disclosures as a means of interpreting future earnings as well as supporting the previous findings from Collett (2004); Soffer et al (2000); and Skinner (1994) that companies are more likely to voluntarily disclose bad news.

**Table 7.10 Abnormal Returns at *Notice of Results* Announcement**

	N	CAR	St-test	T-Stat	Rank	AR	T-Stat
<b>Panel A: NOR YE</b>	108						
(-20, -3)		1.77%	4.72**	1.75	1.64	0.02%	0.13
(-20, 7)		1.11%	3.63**	1.15	0.09	0.02%	0.13
(0,0)		-1.41%	-1.11	-3.26*	-1.65	-1.40%	-3.26**
(-1, +1)		-1.89%	-0.53	-3.49**	-2.58**	-0.32%	-2.47**
(0, +7)		-3.52%	1.58	-5.20**	-2.76**	-0.02%	-1.27
<b>Panel B: NOR HYE</b>	112						
(-20, -3)		1.65%	4.22***	3.94***	1.11	0.02%	1.15
(-20, 7)		1.14%	2.73**	2.10*	1.14	0.01%	0.40
(0,0)		-1.01%	-6.32*	-10.03*	-1.39	-1.01%	6.32*
(-1, +1)		-0.10%	-0.42	-0.28	0.20	-0.01%	-0.24
(0, +7)		-0.28%	-2.42**	-2.84**	0.13	-0.01%	-1.13

Table displays the CAAR and AAR earned around the time the *notification of results* are issued. \*, \*\*, \*\*\* Indicates statistical significance at the 10%, 5% and 1% level respectively. N represents the number of observations for each panel, NOR is the abbreviation for *Notice of Results* announcements. The analysis is carried out over the five different event windows, 0 being the announcement date. S.T-Stat represents the standardised t-test using standardised abnormal returns. Rank is the non-parametric Rank test.

## **7.7 Conclusion**

This chapter examines two main questions: what is the relation between the level of voluntary disclosure and corporate governance, and how does the market respond to voluntary disclosures? The use of voluntary disclosures is central to the agency problem as it provides investors with additional information that can, in turn, reduce information asymmetries (Akhtaruddin et al, 2009). Given AIM companies are granted great discretion in how they communicate with investors, coupled with these companies being small and tightly held, it is expected that information asymmetries are more acute on this market. Therefore, disclosure is potentially an important aspect of AIM companies in order to reduce agency costs. Furthermore, Ajinkya et al (2005) and Kanagaretnam et al (2007) report that corporate governance increases disclosure and reduces information asymmetry.

This study therefore incorporates a wide range of corporate governance variables, as well as proxies for performance and information asymmetry, to determine how these effect the level of voluntary disclosure. This is the first study examining voluntary disclosures on AIM and is also the only study to incorporate all voluntary disclosures made in the earnings pre-announcement period.

Prior literature has well documented the positive association between governance and voluntary disclosure but this analysis has been focused on the disclosures made in the annual report. The voluntary disclosures include: trading statement, operating statements, notification of results, quarterly earnings and general announcement. This study collects voluntary earnings preannouncements to create a voluntary disclosure

index against which to test corporate governance attributes and abnormal returns. The results from the LS regression indicate that corporate governance may not be well placed to influence the level of disclosure. However, there is strong evidence of a positive relation between disclosure and board independence, which supports the findings of Akhtaruddin et al (2009) and Cheng and Courtenay (2006). Furthermore, there is also a positive relation documented between voluntary disclosure and the presence of a nomination committee.

This is the first study to examine this committee separately from other board sub-committees although previous studies by Allegrini and Greco (2013), O'Sullivan et al (2008) and Cerbioni and Parbonetti (2007) have used this variable as part of an index, but with mixed results.

The analysis also provides strong evidence that voluntary pre-announcement disclosure is associated with bad news as a significant negative relation is observed. This suggests that voluntary disclosures are perceived as a signal of negative news in the earnings announcement. There is, in addition, a negative relation between voluntary disclosure and information asymmetry. Using an event study expands the examination into the role of voluntary disclosures as a means of signalling. This documents whether *notifications of results* are perceived as a signal of bad news. The findings strongly indicate that companies pre-releasing the date of their results experience negative abnormal returns on the day the announcement is made. Furthermore, a negative relation is also observed on the date the notification is made. These findings indicate that shareholders view the notification as a signal of bad news which is then realised when the announcement is made. This also supports the theory

from Collett (2004), Soffer et al (2000) and Skinner (1994) that managers voluntarily pre-disclose bad news as a way of mitigating negative earnings shocks and avoiding litigation.

## **APPENDIX 7.1      AIM Rules - Principles of disclosure**

### **Schedule Four**

In respect of transactions which require notifications pursuant to rules 12, 13, 14 and 15, an AIM company must notify the following information:

- a) particulars of the transaction, including the name of any other relevant parties;
- b) a description of the assets which are the subject of the transaction, or the business carried on by, or using, the assets;
- c) the profits attributable to those assets;
- d) the value of those assets if different from the consideration;
- e) the full consideration and how it is being satisfied;
- f) the effect on the AIM company;
- g) details of the service contracts of any proposed directors;
- h) in the case of a disposal, the application of the sale proceeds;
- i) in the case of a disposal, if shares or other securities are to form part of the consideration received, a statement whether such securities are to be sold or retained;
- j) any other information necessary to enable investors to evaluate the effect of the transaction upon the AIM company.

### **Schedule 5**

Pursuant to rule 17, an AIM company must make notification of the following:

- a) the identity of the director or significant shareholder concerned;
- b) the date on which the disclosure was made to it;
- c) the date on which the deal or relevant change to the holding was effected;
- d) the price, amount and class of the AIM securities concerned;
- e) the nature of the transaction;
- f) the nature and extent of the director's or significant shareholder's interest in the transaction;
- g) where a deal takes place when it is in any close period under rule 21, the date upon which any previous binding commitment was notified or the date upon which the Exchange granted permission to deal in order to mitigate severe personal hardship;
- h) where the notification concerns a related financial product, the detailed nature of the exposure.

### **AIM Rules:**

10. The information which is required by these rules must be notified by the AIM company no later than it is published elsewhere. An AIM company must retain a Regulatory Information Service provider to ensure that information can be notified as and when required.

General disclosure of price sensitive information

11. An AIM company must issue notification without delay of any new developments which are not public knowledge concerning a change in:
  - its financial condition;
  - its sphere of activity;
  - the performance of its business; or

- its expectation of its performance,

which, if made public, would be likely to lead to a substantial movement in the price of its AIM securities.

#### Disclosure of substantial transactions

12. A substantial transaction is one which exceeds 10% in any of the class tests. It includes any transaction by a subsidiary of the AIM company but excludes any transactions of a revenue nature in the ordinary course of business and transactions to raise finance which do not involve a change in the fixed assets of the AIM company or its subsidiaries.

An AIM company must issue notification without delay as soon as the terms of any substantial transaction are agreed, disclosing the information specified by Schedule Four.

#### Fundamental changes of business

15. Any disposal by an AIM company which, when aggregated with any other disposal(s) over the previous twelve months, exceeds 75% in any of the class tests, is deemed to be a disposal resulting in a fundamental change of business and must be:

- conditional on the consent of its shareholders being given in general meeting;
- notified without delay disclosing the information specified by Schedule Four and insofar as it is with a related party, the additional information required by rule 13;
- accompanied by the publication of a circular containing details of the disposal and any proposed change in business together with the information specified above and convening the general meeting.

Where the effect of the proposed disposal is to divest the AIM company of all, or substantially all, of its trading business, activities or assets the AIM company will, upon completion of the disposal, be treated as an investing company. The notification and circular containing the information specified by Schedule Four convening the general meeting must also state its investing policy to be followed going forward which must also be approved by shareholders.

The AIM company will then have to make an acquisition or acquisitions which constitute a reverse takeover under rule 14 or otherwise implement the investing policy approved at the general meeting to the satisfaction of the Exchange within twelve months of becoming an investing company.

Where an AIM company proposes to take any other action, the effect of which is that it will cease to own, control or conduct all, or substantially all, of its existing trading business, activities or assets (including the cessation of all, or substantially all, of the AIM company's business), the above requirements to notify the action, publish a circular setting out its investing policy going forward, obtain shareholder consent for that investing policy and implement it within twelve months of taking such action, will apply. Shareholder consent for the action itself will not be required.

#### Disclosure of miscellaneous information.

17. An AIM company must issue notification without delay of:

- any deals by directors disclosing, insofar as it has such information, the information specified by Schedule Five;
- any relevant changes to any significant shareholders, disclosing, insofar as it has such information, the information specified by Schedule Five;
- the resignation, dismissal or appointment of any director, giving the date of such occurrence and for an appointment, the information specified by Schedule Two paragraph (g) and any shareholding in the company;
- any change in its accounting reference date;
- any change in its registered office address;
- any change in its legal name;
- any material change between its actual trading performance or financial condition and any profit forecast, estimate or projection included in the admission document or otherwise made public on its behalf;
- any decision to make any payment in respect of its AIM securities specifying the net amount payable per security, the payment date and the record date;
- the reason for the application for admission or cancellation of any AIM securities;
- the occurrence and number of shares taken into and out of treasury, as specified by Schedule Seven;
- the resignation, dismissal or appointment of its nominated adviser or broker;
- any change in the website address at which the information required by rule 26 is available;
- any subsequent change to the details disclosed pursuant to sub-paragraphs (iii) to (viii) inclusive of paragraph (g) of Schedule Two, whether such details were first disclosed at admission or on subsequent appointment;
- the admission to trading (or cancellation from trading) of the AIM securities (or any other securities issued by the AIM company) on any other exchange or trading platform, where such admission or cancellation is at the application or agreement of the AIM company. This information must also be submitted separately to the Exchange.

## Appendix 7.2 Voluntary Disclosure (additional HYE tables 1)

**Table 7.11 Regression Analysis for HYE Voluntary Disclosure**

	(1) VIndex	(2) CAR	(3) Information Asymmetry	(4) Vindex (combined)
Big-4 auditor	-0.292 (-0.95)	-0.00409 (-0.82)	-0.0281 (-0.77)	-0.435 (-1.44)
Total number of directors	-0.203 (-1.10)	-0.00190 (-1.07)	-0.0105 (-0.80)	-0.215 (-1.15)
Number of neds	0.433 (1.06)	0.00326 (1.30)	0.00589 (0.51)	0.434 (1.05)
Board independence	-0.0464 (-0.10)	-0.00131 (-0.20)	-0.0594 (-1.13)	-0.0915 (-0.19)
CEO duality	-1.049 (-1.65)	-0.0137** (-2.56)	0.0486 (0.93)	-1.087* (-1.67)
Gender diversity	-0.173 (-0.60)	-0.0101 (-1.18)	-0.0167 (-0.55)	-0.306 (-1.04)
Audit committee total	-0.386 (-1.38)	-0.000536 (-0.15)	0.0246 (0.96)	-0.331 (-1.18)
Present accounting expert	-0.00505 (-0.02)	0.00318 (0.43)	0.0116 (0.47)	-0.0157 (-0.05)
Solely neds on remuneration	-0.672** (-2.00)	0.00246 (0.59)	-0.0586 (-1.21)	-0.731** (-2.17)
Nomination total	-0.00205 (-0.63)	-0.0000115 (-0.18)	-0.000569 (-1.10)	-0.00311 (-0.96)
Share issue	-0.0946 (-0.16)	-0.0112 (-0.94)	0.153 (1.20)	0.0203 (0.03)
top5nomad	-0.0185 (-0.06)	0.000794 (0.17)	-0.0392 (-1.11)	0.0190 (0.06)
Dual nomad	-0.273 (-0.71)	0.00194 (0.27)	0.0410 (1.01)	-0.326 (-0.84)
Tobins q	0.0319* (1.68)	0.000243 (1.00)	0.00310 (0.82)	0.0221 (1.06)
Log market cap	0.248** (2.21)	-0.000458 (-0.24)	0.0220 (1.13)	0.263** (2.28)
roa	0.0300 (0.32)	-0.000692 (-1.10)	0.00288 (0.66)	0.0480 (0.62)
gearing	-0.0151 (-0.90)	0.000155 (1.07)	-0.00147 (-1.04)	-0.0146 (-0.89)
year	-0.0771 (-1.13)	-0.000588 (-0.71)	0.000941 (0.28)	-0.0824 (-1.21)
Live/dead	0.237 (0.43)	0.00193 (0.32)	0.0247 (0.64)	0.247 (0.45)
industry	0.0370 (0.52)	-0.000472 (-0.55)	0.00251 (0.67)	0.0418 (0.59)
Total voluntary hye		-0.000916 (-0.90)	-0.00729 (-0.90)	
caar				-4.450 (-0.92)
Info asymmetry				-1.539 (-0.32)
_cons	156.8 (1.14)	1.203 (0.72)	-2.116 (-0.31)	167.5 (1.23)
N	136	134	135	134
R <sup>2</sup>	0.194	0.090	0.176	0.201
adj. R <sup>2</sup>	0.053	-0.081	0.023	0.042
F	2.024	0.902	0.255	1.666
df_m	20	21	21	22
df_r	115	112	113	111

### 8.1 Chapter Description

This chapter presents the main objectives, findings, implication and limitations of the three studies comprising this thesis. This thesis studies the role of monitors, the determinants of corporate governance, and how governance influences voluntary disclosure using the exchange-regulated market, AIM, as the institutional setting. Nomads are the principle regulators of the companies they represent. Their role as monitors is essential to the continuing success and growth of the market. Despite this role the eligibility requirements to become a Nomad are narrow with criteria such as being a firm and not an individual, and having a minimum of two years corporate finance experience. Therefore, the relative ease by which a firm becomes a Nomad, as well as the limited listing requirements for companies to float on AIM, raises questions about the monitoring quality and governance implications surrounding this market.

### 8.2 Summary

Chapter five leads the initial investigation into the role of Nomads. One of the arcs of this thesis is developing the theory into the role of Nomads. The first study is concerned with establishing a Nomad Reputation Index. The index is based on seven measures of Nomad reputation, which is then aggregated to form the Nomad Reputation Index. This index is then used to test the market reaction to Nomad switches to determine the strength of the index using panel data and event study

methodology. The study finds significant evidence that a switch-up to a reputable Nomad is associated with positive abnormal returns. This analysis also serves to develop agency literature, as the choice to switch-up to a costly but more reputable Nomad could be perceived as a form of bonding, as managers are willing to submit to increased external monitoring to protect shareholder interests. The result from this analysis is concentrated in the market-model event methodology; the result is stronger when switches are made to Nomads ranked in the top-5. However, the results from the more robust three-factor model, find that the concentration is limited to the top-15.

On the flip side of the bonding theory is market discipline, whereby shareholders deliberately depress share prices upon the announcement of news perceived to be bad management decision-making. Lateral switches (switches to Nomads of equal rank and includes downward switches) are used as the proxy for this analysis as there is no benefit in making a costly switch when there is no increased quality in the incumbent Nomad. The results support this theory and document a negative market reaction upon the announcement of a lateral switch.

Finally, this study creates the idea of 'strict Nomad' whereby some Nomads are more stringent with regards to the application of the AIM Rules. The company's reporting lag is used as a proxy here, as it is theorised that strict Nomads will encourage their clients to issue their earnings announcement early to avoid possible delays and potential suspensions if the announcement is made after the 6-month reporting window. For both event-study methods, there is significant evidence that a switch to strict Nomads is perceived favourably in the market, with positive abnormal returns being earned following the switch-up.

Chapter six examines the determinants of corporate governance of AIM listed companies with a specific focus on how regulation has changed the level of compliance in what is considered an unregulated market. In addition to regulation, the reputational role of Nomad is also extended to examine whether reputable Nomads are associated with better corporate governance. To do this, a corporate governance index is created using governance items disclosure in the sample companies admission documents. As well as compliance with the corporate governance standards presented by the QCA, the index used in this study also incorporate more recent literature pertaining to governance and includes measure such as gender equality and the presence and structure of the nomination committee. Using LS regression and Ordinal Logit methodology, the results find that rather than as a response to regulation, corporate governance standards have been increasing significantly over time. This is partly due to the proliferation in the awareness of corporate governance issues since the 2007 economic crisis. Furthermore, the findings also suggest that governance is positively associated with company size. This is an intuitive outcome as the costs associated with creating and maintaining quality governance structures are prohibitive to SMEs. Finally, with regard to Nomad reputation, the findings support the hypothesis that Nomad reputation is positively associated with corporate governance compliance.

Chapter seven investigates how the level of voluntary disclosure relates to corporate governance and Nomad reputation, and is the final study in this thesis. To do this, earnings preannouncements are collected to form a disclosure index to assess which corporate governance attributes is associated with the level of disclosure. This is the

only study to examine governance in relation to earnings pre-announcement as prior studies have focused on disclosure made in the annual report. The findings for the corporate governance measures is limited, with only positive significant interactions found between board independence and the presence of the nomination committee. There is also a significant negative relation between the percentage of females on the board and the level of voluntary disclosure. This is also the first study to directly examine the role of the nomination committee as prior studies have incorporated this measure, as part of a committee index. The regression analysis undertaken also documents that voluntary disclosure has a significant negative relation with the company abnormal returns earned over the (-1, +1) earnings announcement window, which suggest that voluntary disclosure is associated with bad news. This supports the findings from Collett (2004), Soffer et al (2000) and Skinner (1994) that managers voluntarily pre-disclose bad news as a way of mitigating negative earnings shocks and avoiding litigation. The LS regression did not support any relation between voluntary disclosure and Nomad reputation. This study also examined the specific earnings-related preannouncements by undertaking an event study to see whether the market perceived the disclosure of the results data as a signal of bad news. This finding strongly supports the view that managers signal bad news through voluntary disclosures as the abnormal returns at both the notification of results date, and the eventual earnings announcement, saw significantly negative abnormal returns being earned.

### **8.3 Limitations and Further Study**

The sample and methodology used in the thesis has both merits and limitations. Firstly, the data is restricted to the AIM market. Although unique in its structure with regards to self-regulation and limited barriers to trade, it is still a developing market which attracts a large number of small companies. This has implications when applying event study methodologies with regard to thin trading. In addition, the theory developing the role of Nomads is only applicable to this market, although it does supply more general associations regarding the importance of monitoring in agency theory specifically to bonding and corporate governance quality. Furthermore, the second and third studies examine new companies admitted to AIM. Further analysis examining how these companies develop their corporate governance would also be of interest. However, these studies do incorporate up-to-date sample data, which provides the opportunity to study how corporate governance has developed, given the 2007 economic downturn.

Finally, this thesis uses LS regression in the final two studies. Although prolific in its application in extant literature, it does have several limitations. Firstly, LS is biased in the presence of multicollinearity, which can result in the variances being larger. The estimator is also sensitive to outliers, which can negatively affect the LS as a linear estimator. Finally, their causality is difficult to determine under LS regression. For example, the direction of the relation between governance compliance/voluntary disclosures and firm performance is difficult to determine. A company with better governance/voluntary disclosure might lead to an increase in firm performance. On the other hand, if a company is performing better, it may have more capital to invest in better governance and increased disclosure.

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