



UNIVERSITY OF  
LIVERPOOL

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**The Effect of Multiple Large Shareholders on Firm  
Performance, Audit Fees, and Corporate Debt  
Maturity: Empirical Evidence from the Alternative  
Investment Market (AIM)**

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A thesis submitted under the requirements of the University of Liverpool for the degree of  
Doctor in Philosophy

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## **Abstract**

This study examines the effect of Multiple Large shareholders (MLS) on firm performance, audit fees, and corporate debt maturity. The study also introduced the type-dimension to add more understanding to the main analysis. The sample comprises 670 firms from the Alternative Investment Market (AIM), a market devoted to SMEs. The study covers ten years, from 2010 to 2019. The study employs three dynamic panel models to control the endogeneity problem for each empirical chapter.

Moreover, the study applies the two-step GMM as the main estimation method. In general, the results suggest that MLS are detrimental to their firms. The study captures the impact of MLS using the ultimate voting rights calculated using the pioneered method of La Porta et al. (1999). The data is collected using the Fame database, which specialises in ownership structure links and shareholding chains.

This study finds that MLS presence, number and (relative power) are negatively (positively) related to firm performance. Moreover, this study finds that MLS presence, number and (relative power) are positively (negatively) related to audit fees and corporate debt maturity. Across all three empirical chapters, the study finds a statistical significance impact of the type-dimension. In more detail, MLS homogeneity -between the first two large shareholders and the first three shareholders- increases the statistically significant impact of the presence of MLS. The results of this study are consistent with the entrenchment effect of MLS. Overall, the study supports the entrenchment and coalition formation effects of MLS.

## **Declaration**

I declare that each part of this thesis is my work. I also declare that no part of the thesis has been formerly provided for a degree qualification in any other university.

Omar Alhamad

# Chapter 1 : Introduction

## 1.1 Background of the topic

Corporate ownership structures create a unique link between shareholders (the principal) and management (the agent). The principal asks the agent to execute certain actions based on contractual agreements. In these agreements, shareholders seek to maximise their wealth. However, managers can exercise some actions based on their self-interest, which may negatively affect shareholders' wealth. Based on this diversion of interests, a conflict-commonly named type one agency conflict – occurs between the two parties. Type one agency conflict is the classical form of agency conflicts in accounting and finance research (Jensen and Meckling, 1976).

Another theme has emerged with the advancement of literature on ownership structures, establishing the grounds for the type-two agency conflict. The presence of one large controlling shareholder (hereafter the LCS) creates another type of conflict - commonly referred to as the principal-principal agency conflict- between the LCS and minority shareholders (Grossman and Hart, 1980; Shleifer and Vishny, 1986). At the beginning of the 21st century, the principal-principal agency conflict became more pronounced with the documentation of multiple large shareholders (hereafter MLS) (La Porta et al., 1999). The conflict has developed into two main scenarios: a conflict between the LCS and other shareholders or a conflict between the LCS and MLS against minority shareholders.

Nevertheless, in the light of the concept of diversification, one may ask why a shareholder maintains block holding. Diversification promotes risk reduction by allocating investment in a variety of assets. One explanation for this contradiction is that some investors maintain a significant block to guarantee ultimate control. Logically, ultimate control comes with private benefits of control (hereafter PBC), such as enhanced management monitoring and lower agency costs. MLS use their control to attain power through two methods, namely the voice (i.e., activism) and the exit.

Regarding the voice method, MLS can intervene using the seats on the board or top management. These positions are obtained through proxy solicitations. Also, MLS can use private communications among them or the LCS and management (Becht et al., 2010). Moreover, MLS can impose power using class-action lawsuits (Agnes Cheng et al., 2010). In addition, MLS can go further in using other channels, such as public criticism, shareholder proposals, and takeover bids (Brav et al., 2008).

The exit method is another way that gives MLS power to impose control. MLS use the exit method through their access to private information about their firms (Admati and Pfleiderer, 2009; Edmans, 2009). In this regard, the acquisition of such information gives MLS the ability to affect the share price. Thus, MLS can use this channel to threaten the management or the LCS to adhere to a certain situation. Otherwise, MLS will trade based on private information, pushing the share price to fundamental value (McCahery et al., 2016; Parrino et al., 2003). Overall, MLS influence many aspects of their firm's outcomes and attributes. In other words, different patterns of ownership structures can affect both types of agency conflicts, creating a collective action problem among many parties. Therefore, the need to study the effect of MLS on firm-level attributes and outcomes is essential.

Theoretical studies show that MLS can use the two methods to play two contrasting roles. On the one hand, MLS may collude with the LCS to control corporate policies and eventually affect the firm's strategy (Bennedsen and Wolfenzon, 2000). By doing so, MLS expropriate minority shareholders by sharing PBC (Zwiebel, 1995). Also, MLS can choose to collude to access important information held by the LCS (Cheng et al., 2013). Because of this coalition formation process, MLS bring an entrenchment effect, harming the minority shareholders. On the contrary, theoretical studies show that MLS may choose to compete for control if the formation of a coalition is not attained (Gomes, 1999; Pagano and Roell, 1998). Thus, MLS will use their power (i.e., bargaining effect) to bring an efficient monitoring role.

Based on these two contrasting roles, empirical studies have tried to examine the role of MLS on many firm-level attributes and outcomes. Many studies have focused on the role of MLS on firm performance. However, the research on MLS's role in firm performance has provided mixed results among different countries and periods (Edmans and Holderness, 2017). The majority of the studies have used either the dataset of Faccio and Lang (2002), La Porta et al. (1999), or Claessens et al. (2000) to draw evidence about the effect of MLS on firm performance. Nonetheless, recent studies such as Ben-Nasr et al. (2015) in France and Basu et al. (2016) in the United States have constructed a panel dataset and reported a positive relationship between MLS and firm performance. On the other hand, Cai et al. (2016) find a concave relationship between the two in China.

Regarding firm-level attributes, MLS research is still emerging. Ben-Nasr et al. (2015) and Boubaker et al. (2017) examine the role played by MLS in affecting debt maturity choices. Also, Ali et al. (2020) assess how external auditors evaluate MLS monitoring and how MLS

affect audit fees. Moreover, Boubaker and Sami (2011) evaluate the effect of MLS on earnings informativeness. Although these studies provide robust and consistent results on the monitoring role of MLS, they use the same dataset for family firms in France. However, these results cannot be generalised to other settings because France has a weak legal system which gives more room for MLS to intervene and impose power (la Porta et al., 1998).

Another strand of studies has considered the type of each MLS. In this regard, Edmans and Holderness (2017) state that "different blockholders are likely to face different incentives and have different skills. Therefore, their impact on firms is likely to be different." (Edmans and Holderness, 2017, p. 553). Thus, this study considers this recommendation as a potential to carry on the research on the role of MLS. Although most of the studies on firm-level attributes and outcomes are conducted in France, this study argues that considering a new market is not enough to carry on the recommendation of Edmans and Holderness (2017). This study argues that considering a new institutional setting should be accompanied by justifications that distinguish the new institutional setting from other settings. Therefore, this study considers the Alternative Investment Market (hereafter AIM) as a new setting with many features that can enrich the debate on MLS studies. More details about these features are provided in the following sections.

## **1.2 Motivation for the Study**

Business history scholars have long debated the separation between ownership and control. The debate dates back to Berle and Means's prominent book. Berle and Means (1932) confirmed that publicly traded firms are widely held. In this vein, widely held firms inherently suffer from high managerial discretion because of a lack of control by shareholders. In these firms, shareholders do not have the incentives and power to impose control. Therefore, these firms are exposed to a classical form of agency conflict (i.e. type one agency conflict). Scholars have examined ownership structures to validate Berle and Means (1932) view and confirmed that such a view is not valid anymore. Many studies have documented the presence of MLS in most markets around the globe (Claessens et al., 2000; Faccio and Lang, 2002; La Porta et al., 1999).

Upon the confirmation of MLS presence, scholars have shifted their attention to consider the individual effect of each large shareholder, considering the commonly known as the disaggregated view of ownership structures. In this vein, scholars have studied the role of MLS on firm-level attributes and outcomes from the agency theory perspective. In other words,

scholars have tried to understand the single effect of one external CG mechanism on firm-level attributes and outcomes.

Recently, scholars have asserted that agency theory cannot fully explain interdependency between CG mechanisms. Scholars have tried to explain the disaggregated view from alternative theoretical perspectives such as institutional theory and resource dependency theory. Based on these theories, a new strand of literature has emerged known as the configurational approach of CG. In this strand, external and internal CG mechanisms are considered part of a puzzle in which each element interplays with the other. The configurational approach of CG seeks to understand the disaggregated view along with the presence of other external CG mechanisms. In other words, Aguilera et al. (2015) state that “ a configurational approach consists of looking at multiple patterns of practices or characteristics that tend to occur together, and examining the effects of such patterns on firm outcomes”(Aguilera et al., 2015, p. 551).

Another motivation for this study comes from the importance of Small and Medium-Sized Entities (hereafter SMEs) and the features of AIM. SMEs are an integral part of every economy. For example, in the U.K., at the start of 2019<sup>1</sup>, the number of large businesses (250 or more employees) was 7700 compared to 5.855 million for SMEs, which means that SMEs account for 99.9 % of the total business population in the U.K. Regarding employment and turnover, SMEs account for 16.6 million employees with a turnover of 2.1 million employees. SMEs form three-fifths of the employment rate and around half of the turnover compared to large businesses. Despite this economic importance, empirical studies on ownership structures of SMEs are neglected.

In addition, SMEs are not made up of closely held firms. Thus, the accountability and transparency of listed SMEs to the public are valuable. Therefore, examining the effect of ownership structures and their role within CG is essential. In this regard, many economies have launched secondary markets to help SMEs grow<sup>2</sup>. In these markets, SMEs are publicly traded with ownership structures composed of LCSs and MLS. Thus, both the agent-principal and the principal-principal conflicts exist, and the need to examine these conflicts and their effect is important.

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<sup>1</sup> The Department for Business, Energy, and Industrial Strategy (BEIS). Can be found on: <https://www.gov.uk/government/publications/business-population-estimates-2019/business-population-estimates-for-the-uk-and-regions-2019-statistical-release-html#headline-statistics>

<sup>2</sup> Examples of AIM rivals are provided in chapter three.

Finally, AIM is an excellent example to investigate firms that fit between the main market and closely-held firms. In other words, firms in AIM are special since these firms can go public but not to the limit to adhere to the restricted listing requirements for a premier exchange. Thus, the AIM fills a niche for these firms, which provides an ideal setting to understand how MLS act in these firms. The following section provides more insights into the objectives and contribution of this study.

### **1.3 Objectives of the study and research questions**

As established in the first section, corporate ownership structures research has taken a new direction toward examining type two agency conflict. In this regard, a new literature theme has considered the role of MLS behind the LCS. This study follows the same theme by using agency theory as the backbone to carry out the empirical analysis. Along the same line, this study augments the disaggregated view of ownership structures by including the configurational approach of CG.

In general, this thesis examines the effect of MLS on firm performance, audit fees, and corporate debt maturity. Thus, a prerequisite for this research is to find a market that is characterised by the presence of MLS. After conducting a preliminary investigation of the presence of large shareholders in many markets, this thesis finds that AIM is a good fit for the basics of this research. In this regard, the study aims to achieve the following three objectives.

First, the presence of MLS is documented in most markets around the globe. However, the documentation of MLS in SMEs is neglected. This study aims to bridge the gap in the literature by documenting the presence of MLS in AIM. The documentation includes a disaggregated view with the help of ultimate voting rights and shareholders' type. The documentation process followed the pioneered approach of La Porta et al. (1999), in which each direct link is traced up the shareholding chains to calculate the ultimate voting rights. The documentation includes detailed information about each large shareholder, including name, type, affiliated firms, percentage of direct holding, and total voting rights.

Second, the study seeks to build on MLS literature by examining the two contrasting roles played by MLS as established in agency theory. As previously mentioned, MLS can bring an entrenchment effect or an efficient-monitoring effect to their firms. Therefore, the study will start by examining the effect of MLS on firm performance to understand which role will take place in AIM. MLS will positively impact their firm if the efficient monitoring role is confirmed. Thus, MLS will be considered an external CG mechanism that will help restrain

entrenched LCSs. In turn, MLS will lower audit fees and shorten the corporate debt maturity period. On the other hand, if the entrenchment effect is confirmed, MLS will be considered detrimental to the overall CG. In turn, MLS will increase audit fees and lengthen the corporate debt maturity period.

In more detail, the choice of these three dependent variables comes from the following reasonings. First, since MLS play two contrasting roles, firm performance is the dominant variable reflecting shareholders' wealth. All shareholders are value maximisers; hence, firm performance reflects how MLS maximises their wealth. If MLS choose to expropriate minority shareholders to gain PBC, firm performance will be affected. Thus, firm performance is considered the primary variable in the literature to understand MLS interaction.

Regarding audit fees, external auditors evaluate the accuracy and completion of the firm's past financial performance and current financial position. By doing so, auditors must evaluate the internal control system and its associated risks. Therefore, it is beneficial to understand whether auditors view MLS as a potential risk if the entrenchment effect is confirmed. The auditors' risk assessment will reflect audit efforts and, ultimately, audit fees.

In addition, MLS aim to have enough control to interact properly with their firms. Therefore, by choosing shorter debt maturity, MLS will restrain the LCS from having full control by including an extra monitoring mechanism. In this regard, short term lenders are more prone to interact than long term lenders. However, if MLS use their power to expropriate minority shareholders by forming a coalition with the LCS, MLS will prefer longer debt maturity due to lower monitoring by outsiders.

Third, although many studies have examined the role of MLS, the type-dimension is still neglected. Many of the studies examine family firms due to their dominant presence. However, since shareholder types are emerging and becoming more active, this study takes a pluralistic analysis by adding the type-dimension to the main analysis. The homogeneity of the first two and first three shareholders are used to understand the effect of the type-dimension by introducing an interaction term to the relationship between MLS and the three dependent variables. In an additional analysis, the study dives into more interpretation of shareholders' homogeneity by focusing on two holding types: family holding and institutional investors. Table 1-1 summarises the research questions, and the development of the hypotheses is discussed in chapters five, six, and seven.

**Table 1-1 Research questions and related hypotheses**

Firm performance	
<i>Q1</i>	What is the effect of the presence, number, and relative power of MLS on firm performance in AIM?
<i>Q2</i>	What is the effect of the type-dimension of MLS on the relationship between the presence of MLS and firm performance in AIM?
Audit fees	
<i>Q3</i>	What is the effect of the presence, number, and relative power of MLS on audit fees in AIM?
<i>Q4</i>	What is the effect of the type-dimension of MLS on the relationship between the presence of MLS and audit fees in AIM?
Corporate debt maturity	
<i>Q5</i>	What is the effect of the presence, number, and relative power of MLS on corporate debt maturity in AIM?
<i>Q6</i>	What is the effect of the type-dimension of MLS on the relationship between the presence of MLS and corporate debt maturity in AIM?

#### 1.4 Contribution of the study

Regarding the contribution, this study can enhance the research of ownership structures in many aspects, benefiting shareholders, managers, regulators, and academics. First, previous studies examining the role of MLS are limited due to the difficulty of constructing a panel dataset about the voting rights of shareholders. In this regard, calculating voting rights - using the pioneered method of La Porta et al. (1999) - can produce an almost impossible task for this thesis. However, the Fame database can ease the calculation by providing valuable information about shareholding chains. In this regard, the study makes its first contribution by constructing a novel dataset about ultimate voting rights in SMEs.

Second, this study can add more discussion to the literature by considering institutional and socio-organisational perspectives. It will help to develop our understanding of the value-added by different types of shareholders upon confirming MLS's role in firm-level outcomes and attributes. Upon the confirmation of the entrenchment effect, it can warn minority shareholders about the cost of MLS. In addition, since this study uses the Herfindahl dispersion measure, it will strengthen our knowledge about the lessons learned from control contestability situations versus the coalition formation situations.

Third, In the literature, no study has examined the role of MLS in SMEs due to the misconception that type two agency conflict is less likely to occur in SMEs (Abor and Biekpe,

2007). Many assume that the SMEs ownership structures are composed of only the LCS, the sole proprietor and the manager (Hart, 1995a). This premise results in one conclusion. SMEs have less pronounced agent-principal and principal-principal conflicts. However, listed SMEs firms have ownership structures that fit the objectives of this study and considering SMEs in MLS research can enrich ownership structure research.

Fourth, AIM is a new experiment regarding its light regulation model (Hornok, 2014). In this regard, AIM uses private-sector supervision to adhere to corporate governance standards. AIM uses the Nominated Advisers (Hereafter Nomads) as a governing body to apply best practices with the option to comply or explain. The Nomads are "responsible to the Exchange for assessing the appropriateness of an applicant for AIM, or an existing AIM company when appointed its nominated adviser, and for advising and guiding an AIM company on its responsibilities under AIM Rules for Companies<sup>3</sup>". Therefore, AIM's corporate governance requirements are self-dealing in nature<sup>4</sup> compared to the requirements set for SMEs in other markets such as NASDAQ. SMEs in NASDAQ are compelled to comply with corporate governance and internal control standards as large firms in the U.S. under the Sarbanes- Oxley Act (Mendoza, 2008). Thus, this study can provide empirical evidence on a lightly regulated market versus other studied markets in MLS research.

Finally, another distinction about AIM is its ownership structure patterns. Khurshed et al. (2005) note that in contrast to traditional IPOs, ownership percentages and control power are not affected after IPOs in AIM. Also, after an IPO, the shares of the top four shareholders are higher than those of shareholders in the main market. Also, In the main market, an IPO influences the control of the majority shareholders, leading to the loss of power and control for majority shareholders. However, ownership and control stay almost the same in AIM (Gerakos et al., 2011; Khurshed et al., 2005). Therefore, the incentives and power of LCSs and MLS are more pronounced in AIM. The following section provides an overall view of the structure of this thesis.

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<sup>3</sup> AIM Rules for Nominated Advisers, March 2018.

<sup>4</sup> In this regard, the exchange not the government have the right to provide principles for companies to follow, and the Nomads behave as an insider regulator that exercises the necessary due diligence to ensure that a company is suitable for initial and continued listing on the AIM.

## **1.5 Structure of the thesis**

This thesis is presented in eight chapters. As outlined in Figure 1-1, chapter one outlines the topic's background, motivation, research objectives, and contribution. Chapter two discusses the main theories and related empirical studies. The third chapter provides information about AIM. The fourth chapter describes the data collection process, sample selection procedures, definitions of the variables, and estimation method.

As outlined in Figure 1-1, the empirical analysis is concerned with the relationship of MLS on three aspects, namely, firm performance, audit fees, and corporate debt maturity. Chapters five, six, and seven follow the same structure for consistency. Finally, chapter eight delivers a summary of the thesis, limitations, implications, and recommendations for future studies.

**Figure 1-1: Structure of the thesis**

<p>The Effect of Multiple Large Shareholders on Firm Performance, Audit Fees, and Corporate Debt Maturity: Empirical Evidence from the Alternative Investment Market (AIM)</p>			
<p>Part One: Background information and literature review</p>			
<p>Chapter 1: Introduction</p>	<p>Chapter 2: Literature review</p>	<p>Chapter 3: The AIM</p>	<p>Chapter 4: Data and methodology</p>
<p>Part two: Empirical analysis</p>			
<p>Chapter 5: The effect of MLS on firm performance</p>	<p>Chapter 6: The effect of MLS on audit fees</p>	<p>Chapter 7: The effect of MLS on corporate debt maturity</p>	
<p>Part three: chapter 8: Summary and Conclusions</p>			

## **Chapter 2 : Literature Review**

### **2.1 Introduction**

This chapter discusses related literature on ownership structures, their development over time, and their relation to the agency theory. It starts by outlining the theoretical background of the theory of the firm and the agency theory. Then, the chapter illustrates evidence of the movement toward ownership concentration and the development of a new type of agency conflict. The chapter provides a theoretical understanding of the contrasting roles of large shareholders. Finally, the chapter concludes with empirical evidence on the impact of the presence, number, relative power, and type of large shareholders.

### **2.2 Theoretical background**

Ownership structures research is established on two main theories, namely, the theory of the firm and the agency theory. The roots of agency theory stem from the fundamental argument of the property rights of public corporations. In this regard, agency theory is considered the backbone for many theoretical models that explain the effect of ownership structure on firm-level attributes and outcomes. Still, to fully understand agency theory, one must establish the grounds for the theory of the firm and the property rights of public corporations. Understanding the whole framework is essential to guide the theoretical and empirical analyses of ownership structure research, especially when considering large shareholders. This section explains the argument of the theory of the firm and the property rights of public corporations. Then, it illustrates the main argument of agency theory proposed by Jensen and Meckling (1976).

#### **2.2.1. The theory of the firm**

The theory of the firm is concerned with explaining why firms are formed in the first place. In practice, economic markets take care of production and trading. In this regard, one can directly engage with these economic markets or hire people. The first option seems cheaper. In this regard, Coase (1937) explains this phenomenon using the commonly named transaction costs. He argues that contracts that are directly executed throughout the market are not entailed only with the price of the goods but also with some costs concerning information, search costs, and enforcement. These costs can be best managed by creating firms that can produce what the market needs internally and attempt to avoid these costs. However, the resources that can be put in the hand of coordinators (management) of the firm are limited. Therefore, if the added

value of the coordinators of the firm is not more than the transaction costs, then the function of the firm would not be better than the direct contracts throughout the market.

Once firms are established, each individual has specific rights based on a contractual agreement and certain responsibilities. In this regard, Modigliani and Miller (1958) assert that equity gives the rights to its owner to receive dividends, and debt gives its owner the right to receive potential interest payments. Hart (1995b) adds that equity gives its owner the rights of various features, such as voting. Therefore, one can understand that shares give their owners two private property rights: dividends and the right to vote.

Based on the above argument, one can realise that the theory of the firm outlines three main pillars in modern corporations: the owners, the managers, and the decision system. The owners have the exclusive right to choose the manager. On the other side, the managers have the exclusive right to direct the decision system. Based on the outcomes of the decision system, the owners expect residual profits. Therefore, shareholders are driven by the incentive and the power to choose a rational individual who can maximise their wealth. Otherwise, shareholders will sell their shares. This opportunity of unrestricted alienability of selling is often considered a central feature of modern public corporations and outlines the basic element of private property rights in modern public corporations. The following section addresses the nature of agency theory and its effect on corporate ownership structures.

### **2.2.2. The nature of the agency theory**

Jensen and Meckling (1976) outline the main features of the agency problem in public corporations. Their view describes the firm as a “black box” that needs to beat transaction costs outlined by Coase (1937), thus achieving profits. Their argument is based on how equilibrium is reached with two conflicting parties: the management and the shareholders. Therefore, an agency relationship is “a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision-making authority to the agent”(Jensen and Meckling, 1976, p. 308).

From this definition, one can specify that the agency problem is centred around a conflict between the two parties who aim to maximise their utility function, therefore acting in contradicting ways in some cases. Thus, to align their objectives, the firm will incur three agency costs: monitoring costs paid by the principal, bonding costs paid by the agent, and residual loss incurred by the principal.

Jensen and Meckling (1976) view of the agency problem and its related costs comes from the residual control given to the management based on the contractual agreement. Although Jensen and Meckling (1976) define the agency conflict and its related agency costs, the concept of the separation between ownership and control needed more attention. Fama and Jensen (1983b) study came to expand more on this notion and link it directly to the firm's survival. They identify an organisation as “the nexus of contracts, written and unwritten, among owners of factors of production and customers. These contracts or internal "rules of the game" specify the rights of each agent in the organisation, performance criteria on which agents are evaluated, and the payoff functions they face.”(Fama and Jensen, 1983b, p. 302). Based on this definition, the agency theory has developed to include the rights of the residual claims. These rights are an important factor in understanding the relationship created between the main two parties in modern firms and align with the argument provided the theory of the firm.

So far, adding the argument provided by the theory of the firm to the argument of the agency theory gives the following framework. Modern public firms are established based on contracts that outline different responsibilities and rights among many parties. Each party is a value maximiser; thus, each party may act in contradicting ways, leading to agency conflict. To this extent, one may ask, if the framework of public firms is clear and well established around contractual agreements, why firms would incur agency costs? In other words, if the management and shareholders enter formal contracts that specify the activities that the former can execute, then why firms would suffer from agency conflict? These contracts can be complete and cover all elements related to the firm’s activities and allocation of returns. Grossman and Hart (1986) and Hart and Moore (1990) answer this phenomenon. Both studies argue that while interaction scenarios between the firm and the market can be predicted in many cases, many situations cannot be foreseen or controlled by managers. Therefore, a complete contract may not be feasible. In situations where managers are faced with unforeseen circumstances, they may have residual control over the performed activities. This availability of residual control to managers may allow them to expropriate shareholders or perform unwanted activities.

Hence, even if we try to eliminate residual control throughout contracts or the decision system, we will still end up with substantial residual control rights that lie in the hand of managers. These rights allow managers to allocate resources as they choose. Thus, the premise that managers are appointed to attain the interest of shareholders and work with the duty of

loyalty may not be accurate. Managers' main objective is not always the utility maximisation of shareholders.

In practice and aligned with Grossman and Hart (1986) and Hart and Moore (1990) view, managers can use residual control rights to achieve managerial discretion, expropriating shareholders directly or indirectly. Shleifer and Vishny (1997) outline some forms of managerial discretion. They assure that the basic form of management expropriation is executed by cashing out shareholders' money. Instances of expensive purchases of personal items -such as company aeroplanes- are witnessed in some American companies. Another form is known as "Tunneling", in which an insider beneficiary sells a firm's products and assets to another firm owned by him/her at a lower price. In addition, (Shleifer and Vishny, 1997) assure that managerial discretion comes from the unwillingness to balance strategic growth. For instance, managers may want to expand the firm beyond reasonable limits. Lastly, managers may stay in their jobs while not well qualified. According to Shleifer and Vishny (1997), lack of competence is one of the costliest forms of management discretion.

Now, the framework of public firms seems clear and well established. In essence, the framework outlines the main aspects, their interaction, and the outcomes of such interaction. Also, agency theory illustrates the consequences of the interaction between the shareholders and the agent, and firms will incur agency costs regardless of the availability of contractual agreements. The following two subsections illustrate the effect of corporate ownership structures concerning the severity of agency conflicts and describe the commonly known type one and type two agency conflicts.

### **2.2.3. Type one agency conflict and diffused firms**

The previous two sections establish that firms are formed as an effective alternative to direct contracts throughout economic markets. Scholars agree that the agency problem describes the conflict of interests between shareholders and managers. This conflict of interest is inherent because of the separation of ownership and control. Historically, the separation of ownership and control was first outlined by Berle and Means (1932). Their book provided data about ownership structures in US firms. The data shows that public firms are widely held, and the control resides in the hand of the management team. In other words, public firms have many shares that can be distributed among thousands, if not millions of shareholders. In this regard Berle and Means (1932) comment that "power over industrial property has been cut off from the beneficial ownership of this property—or, in less technical language, from the legal right

to enjoy its fruits...There has resulted the dissolution of the old atom of ownership into its component parts, control and beneficial ownership. This dissolution of the atom of property destroys the very foundation on which the economic order of the past three centuries has rested.” (Berle and Means, 1932, pp. 7-8).

This view has two implications within the framework of the theory of the firm and the agency theory. First, diffused firms do not perfectly fit the framework stated in the argument of the theory of the firm. Essentially, diffusely held firms do not give their shareholders enough incentives and power to interact. Thus, diffusely held firms are not considered private property (Edmans and Holderness, 2017). Second, diffusely held firms suffer from the lack of balance between the decision system and the owners’ expectation of residual profits. In other words, managers direct the decision system without bearing any wealth consequences of their decisions. In the same line, shareholders collectively suffer the wealth consequences. Nevertheless, since the firms are diffused, shareholders choose to be rationally passive, creating the commonly named free-rider problem.

Based on these two implications, scholars identify the agency conflict in diffused firms as type one agency conflict recognised by a dominant managerial intervention over the decision system with the presence of a sea of owners who suffer from the free-rider problem. Within type one agency conflict, agency theory anticipates that diffused firms are expected to have severe agency conflicts, leading to high agency costs<sup>5</sup>. In practice, public firms seek to overcome agency costs by adopting more balanced ownership structures. The following subsection provides evidence of the movement toward ownership concentration over time.

#### **2.2.4. Type two agency conflict and the prevalence of ownership concentration**

Many scholars have challenged Berle and Means (1932) view about ownership structures in public firms. Shleifer and Vishny (1986) were the first to outline the presence of large shareholders in public firms. They examine the presence of large shareholders in Fortune 500 firms at the end of 1980. They document the presence of at least one large shareholder at the 5% threshold in 354 firms. Their work is considered the first to outline the presence of large shareholders.

Another attempt to examine the presence of large shareholders was conducted by Holderness et al. (1999). The authors use comprehensive data of 1500 publicly listed firms in

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<sup>5</sup> More discussion on these costs is provided later in section 2.2.8

the United States during 1935 and compare it with 4200 firms during 1995. They find that insider ownership was higher in 1995. The percentage of aggregated insider ownership rose by 8%. In addition, Becht and Röell (1999) assert that block-holding is extraordinarily high in Europe, as evidenced in both the United States and the United Kingdom. These three studies are considered early development in examining the presence of large shareholders in public firms. Moreover, these three studies suggest that firms have been moving toward more ownership concentration since the documentation provided by Berle and Means (1932).

Still, the availability of more evidence has emerged around the beginning of the 21<sup>st</sup> century. The seminal studies of La Porta et al. (1999), Claessens et al. (2000) and Faccio and Lang (2002) document the existence of complex ownership patterns around the world. For example, La Porta et al. (1999) find that one-fourth of the firms in their sample have MLS. In East Asian firms, Claessens et al. (2000) calculate that 32.2% of the firms have at least two large shareholders. In Europe, Faccio and Lang (2002) document that 39% of the sample have more than two large shareholders. In the United Kingdom, Marchica and Mura (2005) show that complex ownership patterns are not trivial. Firms with complex ownership structures exceed 10% of the listed firms in the London Stock Exchange main market. Moreover, other studies such as Maury and Pajuste (2005) in Finland, Attig et al. (2006) in Canada, and Andres (2008) in Germany agree that the presence of block holding is prevalent.

Empirical studies have continued to document the presence of MLS. For example, Attig et al. (2008) and Attig et al. (2009) revisit Claessens et al. (2000) and provide evidence that block holding is present and continuing to prevail. Moreover, Jallow et al. (2012) document that the number of MLS is 4.34 on average for 209 firms listed in the LSE main market. These MLS own 31.54% on average of the total shares used in the sample. In the United States, Basu et al. (2016) report that the average number of MLS is 3, owning 38.54% on average of the total blocks for the sample used. The presence of widely held firms accounts only for 3.2% of the sample, while MLS are present in almost 80% of the sample. Finally, recent studies such as Boubaker and Sami (2011) and Ben-Nasr et al. (2015) in France, Barroso Casado et al. (2016) in Switzerland, and Cai et al. (2016); Jiang et al. (2018) in China confirm the existence of LCSs and MLS.

Now, large shareholders dominate public firms around the globe. The formal agreed-upon idea that a sea of homogenous shareholders owns public firms is not exclusively the case. Firms

are owned by block holders who are involved and attentive to the firm's affairs to overcome the type one agency conflict and restore shares' private property rights.

Nonetheless, one may ask if this claim is valid, to what extent did the public initially receive the movement toward more ownership concentration? Holderness and Sheehan (1988) outline that the movement toward more ownership concentration initially faced some widespread public hostility in the United States. Some states passed regulations that limit shareholders voting rights. Also, some defence strategies such as poison-pill were made to restrict takeovers. Public hostility was supported by the argument that large shareholders may expropriate the firm for their private benefits.

These claims are reasonable within the agency theory framework. Large shareholders can provide partial resolution to the type one agency conflict, but they create another type of conflict known as the type two agency conflict. Type two agency conflict best describes the conflict scenarios between the LCS and other shareholders or between LCS and MLS against minority shareholders. Scholars have considered type two agency conflicts a new way to look at agency relationships and have viewed it as a collective action problem among many parties. The next section dives into the sources associated with each agency conflict type.

#### **2.2.5. Agency conflicts sources**

The previous two sections outline two types of agency conflicts. In general, type one agency conflict is inherited from the separation between ownership and control. Shareholders are dispersed with no incentive to intervene with the decision system. In the same line, type two agency is inherited from the extra control given to large shareholders. This section focuses on five potential situations that can aggravate both types of agency conflicts.

First, scholars have considered information asymmetry a potential source of agency conflicts. In general, ownership structures in diffused firms inherently offer the management full access to the firm information and give less information to shareholders. In the same line, concentrated ownership structures give more information to large shareholders, leaving minority shareholders with less access to insider information. With regard to type one agency conflict, (Fama and Jensen, 1983b) assert that information asymmetry is granted due to management engagement in the firm's decision system. Minority shareholders are less informed about the firm's daily operations and -in extreme cases- strategic plans. In addition, type two agency conflict creates information asymmetry between large and minority

shareholders. Large shareholders use the exit and voice methods<sup>6</sup> to access more information about their firms. In both agency conflicts, information asymmetry can be mitigated in the long-run interaction with the agent. In this regard, (Eisenhardt, 1989) asserts that the duration of involvement formulates the agent's behaviour which eventually decreases information asymmetry.

Once information asymmetry occurs, firms may suffer from adverse selection and moral hazard problems. In this vein, (Eisenhardt, 1989) outlines that agency conflict type one provides an avenue for failure in hiring practice. In other words, since shareholders in type one agency conflict suffer from information asymmetry, they cannot assure the skill or abilities needed to assign the position to the agent. Thus, the agent may lack the skills or may assert initially having the required skills but fail to run the firm. In the same line, type one agency conflict provides an avenue for moral hazard in which the agent possesses the required skills but fail to perform the necessary efforts. (Denis, 2001) documents two reasons for the presence of the moral hazard and adverse selection problems. First, in type one agency conflict, minority shareholders do not have the competence to ensure the agent's skills. In this regard, minority shareholders may lack general competence about the required skills or specialised competence in the firm specific industry. Second, minority shareholders may suffer from high monitoring costs if they intend to intervene.

In type two agency conflict, information asymmetry is concerned with a lack of information for minority shareholders. Thus, the severity of adverse selection and moral hazard are less pronounced in concentrated firms due to the closer interaction of large shareholders. Although the adverse selection and moral hazard seem to interchange, one can assert that adverse selection is an ex-ante problem while moral hazard is an ex-post problem. In other words, adverse selection exists at a certain point before assigning the required job, while moral hazard exists after the execution of the decision system.

The fourth source of agency conflicts relates to differences in risk preferences. In type one agency conflict, managers have a residual control attached to their attitude toward risk. In other words, the framework of agency theory affirms that the agent is a rent seeker and risk-averse (Fama and Jensen, 1983a; Jensen and Meckling, 1976). Such behaviour will have two

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<sup>6</sup> More discussion about the exit and voice methods is provided in sections 2.7.2 and section 2.5.

implications. First, the agent will maximise their effort to extract the incentive system. Second, the agent will try to limit the extraction of the incentive system to reflect reputation to the market. Therefore, the agent balances the two aspects to create a strategic risk plan. In practice, (Wright et al., 1996) show that the agents avoid risky investments that may lead to bankruptcy to protect their reputation in the labour market.

From the shareholders' side, minority shareholders are profit-seekers and risk-neutral. Therefore, their risk appetite is focused on any investment with a positive net present value (Denis, 2001). Overall, one can notice that in type one agency conflict, the agent and the principal have different risk preferences, which eventually may aggravate type one agency conflict.

Regarding type two agency conflict, differences in risk preferences are attached to three parties. The first two are the agent and minority shareholders, in which risk preferences are the same as in type one agency conflict. However, in type two agency conflict, large shareholders provide a monitoring role or are considered entrenched individuals<sup>7</sup>. Therefore, risk preferences differ for each large shareholder based on their investment strategy and type. For example, entrenched family investors tend to have a lower risk appetite (Boubaker et al., 2016). Thus, in type two agency conflict, the effect of risk preferences is more severe than in type one agency conflict due to the engagement of controlling shareholders.

The last source of agency conflicts comes from the free cash flow. In this regard, (Jensen, 1986) defines free cash flow as any cash available to the agent over profitable investment opportunities. From the agent's view, free cash flow is an opportunity for firm growth - at least in the short run- even if the investment project is not profitable. Therefore, growth accomplishment can reflect a good reputation of the management to the market (Jensen, 1986). However, in the eye of minority shareholders, free cash flow is better used in cash dividends or stock repurchases (Jensen, 1986). Thus, in type-one agency conflict, the free cash flow can impact the severity of the agency problem.

Regarding type-two agency conflict, the situation is more complex. Since some large shareholders are risk-taking, they will take on more investment projects. However, other large

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<sup>7</sup> Section 2.4.1 and Section 2.5.1 provide theoretical and empirical understanding of these two contrasting roles.

shareholders are risk-averse and prefer to keep the free cash flow. Therefore, the severity of conflicts over free cash flow is more pronounced in type two agency conflict.

Based on the discussion provided in this section, one can note that it is inevitable that each agency conflict type will produce an undesirable effect on the overall firm-level attributes and outcomes. The severity of the impact differs for each conflict type. Thus, the need to overcome these negative sources calls for resolutions to the agency conflicts. The following section provides multiple resolutions within the framework of corporate governance (hereafter CG).

#### **2.2.6. Resolutions to agency conflicts: internal CG mechanisms**

The last two sections conclude that agency conflict will persist upon firms' formation even with a complete contract system. Agency conflicts will inherently present in many sources, such as information asymmetry, moral hazards, adverse selection, differences in risk preferences, etc. In this regard, scholars have debated the role of CG in mitigating agency conflicts and have identified many internal and external CG mechanisms. The distinction between internal and external mechanisms stems from the source that triggers the monitoring action. Concerning internal corporate governance, the action is initiated within the firm's boundaries. In this line, scholars have focused on three mechanisms: board of directors ( hereafter BoD), ownership concentration, and managerial incentives (Aguilera et al., 2015; Walsh and Seward, 1990). Once CG mechanisms are implemented, the agency conflicts gap shrinks, enhancing the firm overall attributes and outcomes (Aguilera et al., 2015; Denis, 2001; Shleifer and Vishny, 1997).

Regarding the managerial incentives system, the monitoring effect stems from the logic that monitored managers are more aligned to the interest of shareholders (Keasey and Wright, 1993). Along the same line, efficient incentive systems can provide a controlled assurance to limit earning management and managerial opportunism. Overall, the incentive system interchanges with other firm mechanisms such as reporting procedures and budgeting systems. The outcomes of these systems can be used to evaluate the managerial incentives system systems. Thus, an efficient incentive system steers management actions and works in shareholders' interest (Klein, 1998).

The second main element of internal CG is BoD. According to (Hermalin and Weisbach, 2001), the board is “an economic institution that, in theory, helps to solve the agency problems inherent in managing an organisation” (Hermalin and Weisbach, 2001, p. 7). BoD performs higher-level managerial actions such as the approval of the compensation system, hiring and

dismissal of executives, and approval of the firm's strategic decisions (Adams et al., 2010). Scholars have focused on examining BoD's independence and size. BoD's independence can be enhanced by including independent directors who perform their duties in the best interest of shareholders. Some studies have documented actions such as protecting shareholders from incompetent management and conflict with the firm CEO to execute certain actions in the best interest of shareholders (Adams et al., 2010).

Moreover, (Adams et al., 2010) assure that independent directors can perform their duties by closer monitoring, rejecting unfavourable decisions, and advising the management team. In addition, an effective BoD can intervene to limit the CEO duality. In this regard, (Malette and Fowler, 1992) assert that CEO duality can lead to one-person decision power. However, BoD can limit such incidents and steer the CEO's decision to serve shareholders' interests. Also, BoD independence assures the presence of a chairman who can restrict managerial opportunism (Haniffa and Cooke, 2002). Thus, one can note that BoD's independence can help assure that the decision system is aligned with shareholders' interests, which eventually reduces agency conflicts and associated costs.

In practice, BoD exercises its duties with the help of two main committees: audit committees and compensation committees. The former asserts limiting information asymmetry by monitoring the reporting system, while the latter asserts monitoring and approving the incentive system. Audit committees perform their duties with closer interaction with internal and external auditors to ensure the quality of the internal control system and the quality of the annual report (Jallow et al., 2012). Also, the audit committee is responsible for nominating the external auditor who will be approved in the annual general meeting. The compensation committee assures the nature of the incentive system of the management team (Sundaramurthy et al., 2005).

Finally, ownership concentration is considered the third internal CG mechanism (Aguilera et al., 2015). Scholars agree that when ownership is concentrated in the hand of large shareholders, they have the incentives to monitor the agent. Although a huge body of research has examined the monitoring effect of ownership concentration, (Daily et al., 2003) examine previous studies using a meta-analysis and find that ownership concentration monitoring is negligible. This claim is attributed to the following drawbacks in ownership concentration research. First, most empirical studies considered the aggregated approach when evaluating ownership concentration monitoring. In this regard, the aggregated approach takes ownership

concentration as a holistic factor that can provide monitoring. However, monitoring is not accomplished by the presence of concentrated ownership but by the individual effect of each large shareholder who can intervene with the firm's decision system. Therefore, one should distinguish between ownership concentration as an internal CG mechanism and the presence of active large shareholders who are considered part of the stakeholder activism.

### **2.2.7. Resolutions to agency conflicts: external CG mechanisms**

As stated in the last section, the distinction between internal and external CG mechanisms was first introduced by (Walsh and Seward, 1990) which examined the interdependences between the BoD incentive system and the market for corporate control. Scholars agree that there are six main external monitoring mechanisms: the legal system, the market for corporate control, external auditors, stakeholder activists, rating organisations, and the media (Aguilera et al., 2015). As this thesis focuses on the effect of MLS on firm performance, audit fees, and corporate debt maturity, it is beneficial to direct the discussion to three elements: the legal framework, external auditors, and stakeholder activists.

First, the corporate legal system is a framework that consists of written laws, processes, and overseeing institutions (Milgrom et al., 1990). In terms of written laws, the corporate legal system focuses on defining the property of rights and outlining ways to protect holders of property of rights. Also, the corporate legal system sets general rules for the establishment of firms and describes many rules to document such establishment. Upon establishing the firm and the presence of the legal system, the firm becomes an independent “legal person”(Davis, 2013).

The legal system is applied using two sets of roles: mandatory rules and soft rules. The mandatory rules must be applied upon specified action within a legal jurisdiction. On the other hand, soft law comprises a set of principles and norms established by specialised legal institutions or advisory institutions (Aguilera and Cuervo-Cazurra, 2004; Licht et al., 2005). A clear example of mandatory laws in the UK is the Companies Act 2006, while UK Corporate Governance Code is an example of soft law.

Regarding the legal system's role as an external mechanism, many studies argue that a conceptual understanding of the legal system can enhance the quality of ownership structure research (la Porta et al., 1998). In this regard, (la Porta et al., 1998) urge the need to direct future studies on understanding the effect of the legal system within the agency relationships, specifically within type-two agency conflicts.

The external audit aims to achieve two main objectives. First, external auditors aim "to enhance the degree of confidence of intended users in the financial statement" (IAASB, 2017). Therefore, within the scope of an external audit, auditors mainly report to shareholders and debt holders. Second, external auditors perform their work to provide a professional opinion that "the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework" (IAASB, 2017). From these two objectives, one can note that the external audit monitoring role is established within the CG framework. In this regard, one can note that the external audit enters the monitoring role by assuring the quality of the financial statements, which eventually reduces sources of agency conflicts such as information asymmetry and managerial opportunism (Francis et al., 2003).

Regarding stakeholder activists, accounting and finance literature has focused on large shareholders. Large shareholders enter the CG framework using two methods: the voice (activism) (Becker et al., 2013; Bloch and Hege, 2003; Denis and McConnell, 2003; Gantchev, 2013; Holderness, 2003) or the exit (Admati and Pfleiderer, 2009; Edmans, 2009). About the voice method, as Shleifer and Vishny (1986) outline and as the name suggests, voice involves any direct communication with the management team. One voice channel (jawboning) involves persuading management or expressing implicit and explicit threats. For example, large shareholders' jawboning includes engaging in discussions with top management, discussing with the BoD, and proposing a specific action to management. In addition, voice can be performed using votes against management and aggressively questioning the management team on conference calls. (Aguilera et al., 2015) illustrate multiple channels such as "letter writing, proxy battles, litigation, publicity campaigns, dialogue with corporate management or the board, asking questions at general annual meetings, and filing formal shareholder proposals" (Aguilera et al., 2015, p. 535). Within the context of the voice method, these channels can be exercised by MLS against the management to alleviate type one agency conflict or against the LCS to alleviate type two agency conflict<sup>8</sup>.

Regarding the exit method, Edmans and Manso (2011) state that MLS can discipline the LCS using their shares through trading. While seeking suboptimal decisions, MLS can sell or threaten to sell their blocks to bring share prices to fundamental values, affecting firm-level

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<sup>8</sup> The empirical evidence section provides a detailed discussion about the voice method.

attributes and outcomes. Thus, the LCS and the management would fear being penalised by MLS.

Thus far, the discussion describes the role of each CG mechanism within the agency theory aspect. Later, the discussion provides an understanding of the interdependencies between external CG mechanisms. The following section illustrates the type of agency costs.

### **2.2.8. Agency costs**

Section 2.2.2 briefly mentions that upon the presence of corporate agency relationships, the firm will sustain three costs: monitoring costs, bonding costs, and residual loss (Jensen and Meckling, 1976). The principal will incur both monitoring costs and residual loss, while the agent will incur bonding costs. This section elaborates on the nature of these costs.

First, monitoring costs are paid due to agency conflicts that inherently result from the separation of ownership and control. However, if the owner solely manages the firm, the firm will incur zero monitoring costs. Thus, in an unbalanced spectrum of information access, the agent will have priority access to the firm's resources, information, and decision system. As section 2.2.5 provides, agency conflicts will provide an avenue for information asymmetry, differences in risk preferences, adverse selection, etc. Therefore, monitoring is essential in agency conflicts to align the agent's actions to shareholders' interests. Monitoring can come from internal and external CG mechanisms, as the agent must provide reasonable assurance on their accountability, competence, and integrity. The agent may lose time reporting the information system's quality and internal policies and procedures to shareholders (Jensen and Meckling, 1976). In addition, the internal control system and board committees and their associated costs are considered monitoring costs. A clear example of monitoring costs is independent directors' and board committee members' compensations. Also, audit fees are an example of monitoring costs associated with external monitoring mechanisms.

Second, bonding costs are directly related to the agent's efforts to show competence and accountability to shareholders. Bonding costs are not necessarily financially related. For example, bonding costs relate to contractual restrictions that may provide opportunity costs to the agent in the form of missed recruiting opportunities for better positions (Jensen and Meckling, 1976).

Finally, monitoring and bonding costs are paid to shrink the conflict gap between principals and agents. However, as (Grossman and Hart, 1980) assure, agency conflicts will persist even after paying the monitoring and bonding costs even with the availability of a complete contract

system. Thus, the firm will incur a residual loss resulting from the gap in expectations after providing efficient monitoring and aligning the agent and principal's interests (Fama and Jensen, 1983a; Jensen and Meckling, 1976).

### **2.3 Alternative theories: a configurational approach**

Although agency theory is well established and recognised among scholars, the theory still bears some drawbacks. Essentially, agency theory assumes that managers will seek their interests regardless of ethical perspectives. Managers seek their interests when left unmonitored. However, this assumption may contradict some social perceptions. Humans have ethics and work in cognitive models that drive them to exercise duties with due diligence and due care. In this regard, stewardship theory comes in place to framework the ethical dimension in agency relationships. According to (Donaldson and Davis, 1991), the agent is a noble human who will maximise shareholders' wealth as a priority. Based on this assumption, stewardship theory is keen to give the agent more room than agency theory, in which the agent must be monitored. In addition, while agency theory ensures establishing incentive systems based on extrinsic motivation, stewardship theory advocates that the agent has intrinsic motivation (Donaldson and Davis, 1991). Therefore, stewardship theory minimises the need for monitoring through incentive systems as the agents will ethically implement the decision system with due care and due diligence (Davis et al., 2018; Donaldson and Davis, 1991).

Another drawback of agency theory is its focus on a narrow-angle of modern firms. Essentially, agency theory describes only two types of conflicts: agent-principal and principal-principal. In other words, agency theory focuses only on the firm's circle of influence. However, modern firms affect many parties outside the circle of influence, and the effect reaches out to the firm's circle of concern. In this regard, stakeholder theory comes in place to outline the firm's relationship with other parties of concern, such as customers, suppliers, employees and so on (Freeman, 1984; Friedman and Miles, 2002; Phillips et al., 2003).

Nonetheless, stakeholder theory considers agency conflicts the primary source of conflicts. Stakeholder theory builds on agency theory to become a distinctive theory in finance and accounting literature. While agency theory focuses mainly on agency relationships, stakeholder theory focuses on the exchange relationship. The exchange relationship is built on any contractual relationship between the firm and any other party (Van der Laan et al., 2008). For example, modern firms enter into contractual relationships with suppliers who provide the firm with the required resource for sales or production. Therefore, the firm builds an exchange

relationship with the supplier based on a contractual relationship. In turn, stakeholder theory considers the supplier an essential player in the firm's circle of concern. Stakeholder theory has two implications. First, the agent should pay attention to the agency and exchange relationships. In other words, the management team should accommodate stakeholders' interests and shareholders' interests (Ayuso et al., 2011). Second, stakeholder theory assures the importance of stakeholders' interests for the survival of modern firms (Hill and Jones, 1992).

Although stewardship theory has added an ethical dimension to the agent's behaviour, some scholars observe that the firms have intrinsic perspectives as economic institutions with legal personalities. The institutional theory stems from the logic that economic institutions provide stability and meaning to the overall circle of influences, including social and economic settings (North, 1990; Scott, 1995). The theory is centred around two premises. First, the principal and the agent efforts shape the behaviour of an institution which can often lead to "homogeneity in structure, culture and output" (DiMaggio and Powell, 1983). Second, continuous homogeneity (i.e. isomorphism) eventually leads to legitimacy. In this regard, (Suchman, 1995) defines legitimation as "a generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p. 574). Therefore, internal and external CG have been adopted due to the continuous adoption of legitimate institutional logic in which the adoption is done by coercive, normative, or mimetic isomorphism (Scott, 1995).

An excellent example of developing an institutional process is called decoupling (Westphal et al., 1997; Westphal and Zajac, 2013). For example, adopting separate accounting and auditing standards for SMEs simplifies the auditing requirements instead of internalising external CG mechanisms. In this regard, the process started with a beneficial set of rules that eventually became a legitimate process over time. Then, the process decouples to accommodate SMEs' accounting and auditing requirements. The third premise of institutional theory is the importance of reputation. Since firms' homogeneity or isomorphism requires legitimation, firms will pay attention to any unfavourable social behaviours considered illegitimate.

However, one may propose that firms are not homogeneous in interests, having various competing interests. Based on this premise, resource dependency theory (hereafter RDT) comes in place to extend this concept. In this regard, (Salancik and Pfeffer, 1978) assure that firms do not work in isolation in terms of interest but require both demands and offers from the

external environment, creating interdependence between firms. Therefore, RDT advocates assure that the main goal of internal and external CG is to "reach a consensus in the mutual interdependencies between internal and external stakeholder relationships by effectively distributing the power and allocating the asymmetric resources" (Aguilera et al., 2015, p. 499). Thus, to mitigate the interdependency gap, firms should internally maximise dependencies to avoid uncertainty and conflict with stakeholders (Hillman and Dalziel, 2003; Hillman et al., 2009).

Finally, finance and accounting literature has considered two competing arguments: the shareholders primacy theory and the team production model. On the one hand, shareholders primacy theory advocates that the firm decision system should prioritise shareholders' interests. The argument of shareholder primacy theory comes from agency relationships and private property rights. However, the team production model opposes the view of shareholders' primacy (Lan and Heracleous, 2010). The team production model depicts a framework that includes three parties: firms with many stakeholders, stakeholders who are rent-seekers, and controlling BoDs (Blair and Stout, 1999; Rajan and Zingales, 2000). BoDs align stakeholders' interests in two ways: maintaining the problem of coordinating efforts ex-ante and cooperating with the stakeholders to prevent the problem of free rider ex-post. Based on this framework, stakeholders' interests will be proportionately implemented to stakeholders' respective involvement with the firm (Klein et al., 2012). Therefore, based on the team production model, one can understand BoD is the anchor in protecting stakeholders' claims and has complete control over the firm ultimate system and resources. The following section provides implications of these alternative theories within a configurational approach.

#### **2.4 The implication of the configurational approach**

Thus far, the discussion provided that agency theory focuses on the relationships and monitoring mechanisms within the firm's boundaries. However, such theory provides a narrow consideration and fails to include external relationships and mechanisms outside the firm's boundaries. Other theories, such as the stewardship and stakeholder theories, advocate considering alternative external mechanisms. Moreover, many scholars agree that CG is an effective tool to mitigate both types of agency conflict. In more detail, CG focuses on how stakeholders assure that managers will execute their tasks to enhance the firm's wealth. CG deals with the means, mechanisms, and regulations that ensure shareholders get returns for their investments. In addition, CG establishes a balance of interest between stakeholder activists, creditors, customers, suppliers, etc. Therefore, since firms suffer from a collective

action problem among many parties, CG research should consider collective action resolutions. In other words, examining each CG mechanism may not benefit accounting and finance research. The ultimate way to tackle agency conflicts is to implement a configurational approach that considers the interdependency of CG mechanisms. As section 2.2.7 outlined, scholars have suggested six main external monitoring mechanisms. This study considers the interdependency between stakeholder activists (in the form of MLS presence) and two external CG mechanisms, namely external audit and debt holders. As a preliminary step to understanding the effect of MLS intervention, the study seeks to understand the impact of MLS on firm performance. In this section, more discussion on the interdependency of external CG mechanisms.

#### **2.4.1. The role of large shareholders: monitoring vs entrenchment**

To understand the role played by large shareholders within the configurational approach, one should understand two main views. The first view relates to block holding from the investors' side and the definition of large shareholders' tiers. The second view relates to the block holding role as an external CG mechanism.

Regarding the first view, theoretical studies on ownership structures explain the presence of large shareholders based on one premise. Both LCSs and MLS use block-holding to gain PBC (Barclay and Holderness, 1989; Bloch and Hege, 2003; Bradley et al., 1988; Demsetz and Lehn, 1985; Doidge et al., 2009a; Dyck and Zingales, 2004; Zwiebel, 1995). These PBC comes from the differences between cash flow and control rights (Claessens et al., 2000; Faccio and Lang, 2002; La Porta et al., 1999). In this regard, cash flow rights represent the incentives for shareholders, while voting rights represent the power. Therefore, PBC are well extracted if the power is higher than the incentives (Bradley et al., 1988).

Large shareholders secure block holding through many control mechanisms. In this vein, La Porta et al. (1999) outline that control can be obtained using different methods such as pyramiding and cross-holdings. Faccio and Lang (2002) add that control mechanisms describe certain methods such as dual-class shares, pyramiding, and cross-holdings. These “are devices that give the controlling shareholders control rights in excess of their cash-flow rights” (Faccio and Lang, 2002, p. 366). Also, Bloch and Hege (2003) assert that large shareholders strategically plan and structure their block holding. In turn, Bloch and Hege (2003) conclude

the prediction that complex ownership patterns occur by design “intention”, not by coincidence<sup>9</sup>.

Based on these studies, one can notice the following implications. First, although risk diversification principles are not accomplished in block holding, large shareholders still benefit from PBC. Such benefits come in monetary returns (Barclay and Holderness, 1989; Zwiebel, 1995), non-monetary returns (Demsetz and Lehn, 1985), or synergies in production. Therefore, the argument provided that large shareholders contradict risk diversification can be challenged by the argument of PBC. Second, one can notice that intervention is exercised when the PBC are higher than the intervention costs. Therefore, the level of extraction depends on the level of control. In other words, to better understand the intervention and extraction effect, one must understand that large shareholders come in two main tiers, namely, the LCS and MLS.

Overall, the LCS is expected to have the lead in intervention, followed by the MLS. Many scholars have considered the LCS as entrenched owners. In general, the LCS have small direct incentives represented by the direct cash flow and high power embodied in the total percentage of voting rights (Faccio and Lang, 2002; La Porta et al., 1999). According to Boubaker et al. (2021), entrenched owners are characterised by four attributes. First, entrenched owners prefer direct PBC over alternative productive projects that provide lower PBC. Second, entrenched owners seek to secure PBC by the inefficient use of the firm’s productive assets. In addition, entrenched owners tend to limit additional stakeholder activists to guarantee ultimate control over their firms, minimising access to external financing. Finally, entrenched owners have a lower risk appetite.

Although many scholars have advocated the entrenchment role of the LCS, Shleifer and Vishny (1986) advocate that the LCS can perform an efficient monitoring role over the management team. Shleifer and Vishny (1986) propose a model that deals with majority shares with 50% or more of the total shares and a sea of small shareholders. Accordingly, the model is based on the following control contest situation. First, total shares are divided among wide investors and one large shareholder who owns 50% or more of the total shares. In the model, the LCS does not participate in the management team. Also, the LCS can devote resources to enhance management’s performance, and these resources are paid for by the profit attained

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<sup>9</sup> The case of Iberia Airline sales of blocks is one example that supports this prediction. The company sold blocks to a specific shareholder to advance strategic plans. The company sold blocks to two alliance airlines British Airway and American Airlines; and many local banks. Also, to advance strategic plans, one block of shares was set aside for employees of the company. This action took place before the initiation of its IPO in 2001.

after the improvement. Their analysis focuses on establishing the role of the LCS in internalising takeover situations to improve management performance. Shleifer and Vishny (1986) model support that the LCS can play an important role as a monitor and a bidder since the majority block is positively related to takeover premium and firm value. More precisely, the LCS can execute a value-increasing takeover, and the more the block he holds, the more value he brings to the firm. Shleifer and Vishny (1986) model has the following implication. In their model, firms do not suffer from type one agency conflict, which means that closer monitoring imposed by the LCS enhances management performance.

MLS comes as a second-tier shareholder with enough incentives and power to impose control. In this vein, MLS play two contrasting roles, namely the efficient monitoring role and the entrenchment role. Regarding the efficient monitoring, Bloch and Hege (2003) propose a new model that explains how control is allocated in firms with two block holders and many small shareholders. Since many of the firms' decisions are in the hand of the board, the authors assume that shareholders would use their active "voice" to nominate board members. The model predicts that each of the two-block holders submits two different proposals to the board. Small shareholders only participate if they are sufficiently relative<sup>10</sup>. To seduce small shareholders to vote for one proposal, the proposer commits to limiting PBC that he/she will incur. Therefore, the only difference that may attract small shareholders is the proposal's ability to enhance the firm's strategic plans.

Bloch and Hege (2003) model has the following implications. First, it emphasises that large shareholders do not work in isolation. In other words, Bloch and Hege (2003) support that stakeholder activists research should consider two parties into an account, namely the largest two shareholders and minority shareholders. Therefore, the presence of the LCS is not enough to examine large shareholders. Second, the analysis should consider control contestability situations among the largest two shareholders. In this regard, Bloch and Hege (2003) state that "corporate control is contestable if the incumbent cannot increase the level of control rents without losing control in a control contest". In other words, MLS can maximise their PBC by creating value using the relative size of blocks. For instance, one MLS may incur fewer PBC when he cannot add value<sup>11</sup> to the firm or when his block decreases in size compared to other

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<sup>10</sup> Since each investor is rational and seek to maximise his utility, "relative sufficient shareholders" would only participate when the benefits outweigh the costs of the participation.

<sup>11</sup> To add value to firms, one shareholder needs to be a wealth creator. Wealth creation can be attained by using the shareholders' ability, knowledge, tools, experience, and skills to the benefit of the firm. These aspects will help to form the proposal that each shareholder submit to the board.

current block shares. So, to minimise the extraction of PBC, firms can design an optimal structure by assigning a relatively large block to less efficient shareholders to balance the competition. In other words, the one in control should not be the most efficient. These two factors (i.e. the relative size of the block and wealth creation) are substitutes, and the LCS should not be the most efficient. If the LCS is the most efficient, he/she can expropriate other shareholders and extract higher PBC.

Regarding the entrenchment effect, MLS can affect their firms negatively. First, the negative effect of MLS is built based on the following logic. As MLS only seek to secure PBC, monitoring is not their goal. MLS use monitoring only if it restricts the LCS from fully extracting PBC. Therefore, if the LCS and MLS can share PBC, they will extract these benefits, negatively affecting the firm's overall outcomes and attributes. Therefore, there is a need for a theoretical model that explains how PBC are allocated.

To achieve this role, Zwiebel (1995) argues that PBC can be allocated among many block holders. Partial PBC can be allocated to non-controlling block holders, even if they hold less than the majority votes. Moreover, block holders can form some coalitions to acquire full control in some situations. Zwiebel (1995) explains that if the firm has one controlling shareholder who can fully extract PBC, other block holders will avoid participating in the contest situation. However, if control can be contested, block holders would participate in moderate blocks to attain these partial PBC. In other words, PBC can be attained based on the strategic importance of the block to form a coalition. Therefore, different equilibria would exist based on the strategic importance of each block.

Zwiebel's (1995) study has the following implication. Large shareholders –both the LCS and MLS- intervention can take a parallel direction when it is beneficial for them to partition PBC. On the other hand, large shareholders can bring a contrasting direction when the LCS aim to extract PBC for him/her alone. Thus, MLS will extract PBC in the first scenario, expropriating minority shareholders and increasing agency costs. In the second scenario, MLS will contest the LCS to prevent complete extraction of PBC, helping the minority and decreasing the type two agency costs. Based on these two scenarios, agency costs will transform to affect many firm-level attributes and outcomes.

Finally, Pagano and Röell (1998) and Brav et al. (2016) confirm that MLS can play two opposing roles: MLS can use their voting rights to prevent the LCS from profit diversion or form a control coalition to divert profit. The latter comes at the expense of minority

shareholders and leads to lower firm performance, while higher control contestability leads to higher firm value<sup>12</sup>.

Thus far, the discussion provides theoretical models that consider large shareholders in two tiers to separate the effect of the LCS from the effect of MLS. Also, theoretical models have acknowledged that the presence of each tier is not the driving force that reflects agency costs; however, the driving force is control contestability situations versus coalition formations. Also, it is established that control can be divided between many agents who seek to secure PBC. The following section outlines how large shareholders interplay with other external CG mechanisms within the configurational approach.

#### **2.4.2. Other external CG mechanisms**

As previously discussed, type one agency conflict stems from the residual control rights in the hand of the management team. In this regard, scholars have suggested alternative solutions to mitigate such conflict. Among these alternatives, many scholars favour using ownership concentration in the form of block holding as an extra mechanism to enhance monitoring. Becht et al. (2003) advocate that the block holders model is the most favoured mechanism in many countries. Block holders intervene to mitigate type one agency conflict using the voice and exit methods. However, block holders can also aggravate the agency problem when they have enough control to expropriate minority shareholders, which leads to type two agency conflict. Thus, different patterns of ownership structures can affect both types of agency conflict, creating a collective action problem among many parties.

In this regard, firms seek to mitigate type two agency conflict through other means such as external auditing. Accounting literature advocates that an external audit mitigates agency costs by assuring that information asymmetry is reduced, thus ensuring the quality of financial statements. The configurational approach suggests that external audit efforts depend on the firm's ownership structure and the litigation risks. Accounting literature has considered two models: the shareholder and stakeholder models (Ball et al., 2000).

On the one hand, the shareholder model is characterised by a strong legal protection framework that can mitigate information asymmetry for the minority shareholder. In the same line, legal protection comes at the cost of the demand for timely and high-quality accounting information. On the other hand, the stakeholder model is characterised by a weak investor

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<sup>12</sup> The largest shareholder cannot control the firm solely unless he owns higher than optimal shares to control (i.e. 50% or more). In other words, at the 50% threshold control is not contestable.

protection framework, which leaves MLS with the burden to reduce information asymmetry and protect minority shareholders. Nonetheless, as block holders have access to private information, they can use their block holding to limit the LCS, which alleviates the information asymmetry gap. Overall, voting rights are the primary sources of power since most legal frameworks set a minimum voting rights threshold to exercise ex-post enforcement.

In more detail, legal frameworks are set in two directions. First, in the shareholders model, legislations limit the ability to expropriate minority shareholders either by the manager (in type one agency conflict) or by large shareholders (in type two agency conflict). In this regard, Cai et al. (2016), Johnson et al. (2000), and La Porta et al. (1999) support that expropriation comes from sources such as tunnelling, related-party transactions, overvalued management pays, and appointment of related parties in the management team. Therefore, in the shareholders model, the legal framework sets the means that curb expropriation sources by applying ex-ante enforcement. At the same point, the legal framework sets the means to control the effect of expropriation sources by applying ex-post private enforcement. The legal framework allows setting court criminal or civil cases in extreme situations. On the other hand, the stakeholder model provides a legal framework that is relatively low and depends to a large extent on the role played by MLS.

Therefore, from the demand side of each model, the needs and efforts of external auditors are different, which eventually affects audit fees (Desender et al., 2013; Francis and Dechun, 2008). In the stakeholder model, accounting information is subject to a relatively significant political influence, which leaves MLS with the burden of mitigating information asymmetry (Ball et al., 2000). In the shareholders model, external audit is exercised in a strong legal environment that imposes a risk to block holders and auditors. As a general rule, investor protection is high when the legal framework is strong (la Porta et al., 1998). Therefore, information asymmetry and agency costs are reduced by applying timely and high-quality public accounting information (Ball et al., 2000).

In the shareholders model's demand side, block holders are active in monitoring management and reducing type one agency conflict from the firm side. At the same point, auditing efforts may be less since large shareholders reduce the type one agency conflict and information gap. However, when MLS form a coalition with the LCS to expropriate minority shareholders, the efficient-monitoring effect is absent. Thus, auditors are faced with type two information agency gaps accompanied by the risk of large shareholders' expropriation. At the

same time, LCSs and MLS adhere to a strong legal framework which exposes them to high litigation and reputational risk (Carcello et al., 2002). Therefore, regardless of the power of expropriation, LCSs and MLS tend to mitigate the risk by requesting higher audit efforts.

In the shareholders model's supply side, auditors are keen to assess the agency risk associated with the ownership structure (Chan et al., 1993; Davis and Ricchiute, 1993; Fields et al., 2004; O'Keefe et al., 1994; Palmrose, 1986; Simon and Francis, 1988; Simunic, 1980; Zhang et al., 2007). Based on the risk assessment, agency conflicts will reflect on auditing efforts. In other words, the higher risk that stems from severe type two agency conflict leads to high efforts and higher risk premium attached to the audit fees (Francis and Dechow, 2008; Kurt A et al., 2013).

In the stakeholders model, accounting information is affected by high political interference (Ball et al., 2000). In turn, large shareholders are exposed to low litigation risk. At the same time, agency costs from type two agency conflicts and information asymmetry risk are high. Hence, from the firm side, when MLS cannot form a coalition with the LCS, they will require higher audit efforts using their voice or exit method (Desender et al., 2013; O'sullivan, 2000). However, when MLS and LCSs have the same objectives, they will require lower audit efforts. In this situation, the legal framework is weak, and the litigation and reputational risks are low (Desender et al., 2013). From the auditors' side, when auditors face low litigation risk, they are more likely to apply to their client needs (Hwang and Chang, 2010). Therefore, auditors are most likely to ignore expropriation risk and agency conflict, diminishing the risk premium associated with agency costs.

The previous discussion elaborates on the interplay between large shareholders and other external CG mechanisms through agency costs and information asymmetry. In this regard, accounting literature and finance literature emerge to consider the role of large effect on firm-level outcomes and attributes within the configurational approach. The logic provided by the exit and voice methods is used in the accounting research to account for the effect of large shareholders and audit fees. The external audit monitoring role is established within the configurational approach of CG by assuring the quality of the financial statements, which eventually reduces sources of agency conflicts such as information asymmetry and managerial opportunism (Desender et al., 2013). In addition, the configurational approach has advocated the disaggregated view of large shareholders. LCS and MLS individual effect is studied to understand the role of stakeholder activists in the CG framework.

Therefore, scholars should consider a pluralistic approach for the following reasons. First, firms do not depend exclusively on a single monitoring mechanism but apply numerous internal and external mechanisms. Second, monitoring mechanisms are interdependent. In other words, each monitoring mechanism can trigger a direct impact on other monitoring mechanisms. Third, when wrongly applied, each monitoring mechanism may provide the opposite role ( i.e. entrenchment role). For example, large shareholders are considered an external monitoring mechanism. However, when their incentives are high and the legal framework is low, large shareholders will provide an entrenchment role, expropriating minority shareholders. Therefore, one should pay attention to the fact that each mechanism is a two-edged sword that can help the firm, but when wrongly used, it worsens the agency and exchange relationship conflicts. Thus, the best way to tackle interdependencies is to apply a holistic examination among external monitoring.

Overall, this thesis aims to understand the interdependencies between external CG mechanisms within AIM's legal framework. In more detail, the role of large shareholders - as an external CG mechanism- is studied to determine its impact on firm performance. Then, the role of large shareholders is studied to understand how they affect the external audit role. This perspective is a response to the call made by Aguilera et al. (2015) who assert that " future research would benefit from a more in-depth understanding of how external auditors assess the CG characteristics of firms to determine their audit scope" (Aguilera et al., 2015, p. 530). Finally, this thesis tries to understand the interplay between two main stakeholders activists: large shareholders and debt holders. The following section presents empirical evidence within the configurational approach.

## **2.5 Empirical evidence**

The last section concluded that theoretical studies have provided models that specify the role of the LCS and MLS on the overall firms' outcomes and attributes. Some of these models focus on PBC and how these benefits can be devisable among many agents in an equilibrium (Zwiebel, 1995). Others provide arguments on the effect of control contestability situations and the formation of control coalitions between large shareholders (Bloch and Hege, 2003). In addition, the last section provided the interplay between external CG mechanisms within the configurational approach. This section provides empirical evidence on both the positive or negative impact of the LCS and MLS on firm-level attributes and outcomes. Also, this section emphasises the importance of the type dimension and provides specific empirical results related to the homogeneity of shareholders.

### **2.5.1. Empirical evidence on firm outcomes and attributes**

Empirical studies of the role of large shareholders on firm-level attributes and outcomes have taken two main streams: the aggregated and disaggregated view. Regarding the former, section 2.2.6 provided that ownership concentration- represented by the aggregated sum of large shareholders- is considered part of the internal CG mechanisms. In this vein, scholars have tried to examine the effect of aggregated ownership on firm-level attributes and outcomes. Scholars have attempted two main approaches. The first approach has considered one characteristic of large shareholders and investigated its effect on firm outcomes and attributes. The second approach examines the wedge between cash flow rights and control rights for the LCS (Ben-Amar and André, 2006; Faccio and Lang, 2002; Franks and Mayer, 2001; La Porta et al., 1999; Poletti Hughes, 2005). As a general rule, both approaches have provided mixed results (Demsetz and Villalonga, 2001; Edmans and Holderness, 2017).

In more detail, early empirical studies on the aggregated view of large shareholders have considered the differences between diffused firms and concentrated firms in terms of some measures such as investment policies, the frequency of corporate-control transactions, accounting returns, and Tobin's Q. For example, Holderness and Sheehan (1988) conducted a study on 144 US firms with majority shareholders. According to their study, firms with ownership concentration perform acceptably. Also, about the management monitoring role, they find that large shareholders lead the management team. Lins (2003) examines the effect between aggregated outsider holding and firm value and confirms the efficient monitoring effect. Lins (2003) asserts that the relationship is stronger when investors' protection rights are weak in which MLS intervene to provide extra monitoring effect.

Furthermore, many scholars find either a non-linear or concave relationship between elements of ownership structure and firm value. Morck et al. (1988) examine the effect between Tobin's Q and insider blocks owned by members of the board of directors. The results support that the efficient-monitoring effect persists up to 5%, then the entrenchment effect persists for blocks between 5% and 25%. Then, above 25%, the efficient-monitoring effect remains. Also, Wruck (1989) examines how the movement toward more ownership concentration affects the announcement returns. On one side, informed private purchase of blocks leads to positive announcement returns when the initial concentration is low. However, informed private purchase of blocks leads to negative announcement returns when the initial ownership concentration is moderate.

In addition, Pagano and Roell (1998) apply a cross-sectional analysis to investigate 1173 US firms. They find that firms owned by most corporate insiders exhibit a significant curvilinear relationship with firm value. Firm value increases as the ownership percentage increases until it hits approximately 40% to 50%, and then it slightly decreases above this range. In other words, ultimate controlling insider ownership affects the firm value positively, but excessive ownership by insiders affects the firm negatively. On the other hand, firms owned by institutional investors exhibit a significant positive relationship between block holding and firm value.

Finally, few studies find no relationship between certain ownership elements and firm outcomes. For example, McConnell and Servaes (1990) investigate aggregated outsider block and Tobin's Q, and find no relation between the two. Mehran (1995) adds that there is no relation between aggregated outsider block and ROA. Regarding the wedge between cash flow rights and control rights for the LCS, Claessens et al. (2000), Lins (2003), and Attig et al. (2006) find that control rights that surpass cash flow rights lead to lower performance. Cronqvist and Nilsson (2003) find the opposite result.

With the emergence of theoretical models that explain the disaggregated view of large owners, empirical studies have applied a pluralistic view. In this regard, empirical studies have considered each block and used different proxies to link large owners with firm outcomes and attributes. The main purpose of the disaggregated approach is to understand the effect of large shareholders at a micro-level. In other words, the disaggregated view intends to understand the economic effects of each block and how it interacts with other blocks.

In general, empirical studies of the disaggregated view are limited due to data availability. In this regard, El Ghouli et al. (2018) comment that "relying on an alternate source that provides more recent data would bring a major shortcoming: data constraints would prevent us from specifying a comprehensive set of ownership variables, an important issue according to prior research" (El Ghouli et al., 2018, p. 3). As with the aggregated view, empirical evidence in this stream is mixed (Edmans and Holderness, 2017).

One of the few empirical examinations of the relationship between MLS and firm performance was conducted by Maury and Pajuste (2005). Using 136 Finnish firms, the authors find that a higher allocation of shares leads to higher firm performance. When other block holders challenge the largest shareholder, firm performance is higher. The authors find that when control is contestable, monitoring is high, leading to better performance. In addition,

Laeven and Levine (2008) investigate the presence of complex ownership patterns. Based on data for 1657 western European firms, the authors find significant differences in performance between firms with MLS and widely-owned firms. Firms with MLS substantially outperform widely-held firms. The more dispersion of cash flow rights among MLS (i.e. less contestability), the less firm performance.

These two studies were the first to document the efficient monitoring effect of MLS. Following the same line, Attig et al. (2008) consider the data from both Claessens et al. (2000) in East Asian firms and Faccio and Lang (2002) in Western European firms and confirm the efficient monitoring effect. The documentation of the efficient monitoring has persisted in Franc (Ben-Nasr et al., 2015; Boubaker et al., 2021; Boubaker et al., 2016; Boubaker et al., 2017; Boubaker and Sami, 2011), in U.K main market (Jallow et al., 2012), and in Switzerland (Barroso Casado et al., 2016).

Regarding the entrenchment effect, Konijn et al. (2011) examined US firms between 1996 and 2001. The authors find a negative relation (positive) between the presence and number (dispersion) of the largest five shareholders and firm performance. In the same line, the documentation of the entrenchment effect has persisted in Chinese firms (Cai et al., 2016; Jiang et al., 2018), Brazilian firms (Crisostomo et al., 2020), and UK SMEs firms (Feito-Ruiz et al., 2021).

### **2.5.2. Empirical evidence on the type of large shareholders**

The previous section outlined empirical studies on the presence of MLS and its effect on firm performance. Some of these studies have considered the importance of the type of MLS<sup>13</sup> and have only documented the presence of different shareholder types without concluding their effect on firm-level attributes and outcomes<sup>14</sup>. Other studies have followed the aggregated view and have considered only two MLS types: insider and outsider holdings. In addition, some studies have taken a wide approach to distinguish outsider types, such as institutional holdings and family. However, the importance of the type dimensions within the disaggregated view is limited. In this regard, Edmans and Holderness (2017) assert that “blockholders are evolving. For example, institutional investors today are more willing to be hostile toward management than they were only 30 years ago.” (Edmans and Holderness, 2017, p. 543). Also, Yermack

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<sup>13</sup> The term “identity” and “type” are used interchangeably in this thesis to classify shareholders into different groups based on common characteristics.

<sup>14</sup> See for example Shleifer and Vishny (1986), La Porta et al. (1999), Claessens et al. (2000), Faccio and Lang (2002), and Anderson and Reeb (2003).

(2010) ensures that “the success of institutional investor activism to date appears limited” (Yermack, 2010, p. 117). This section sheds light on the empirical studies of the MLS type dimension.

In general, type dimension studies have investigated the role played by a specific type of large shareholders, such as family-holding (Andres, 2008; Barth et al., 2005; Chu, 2011; Villalonga and Amit, 2006), institutional-holding (Bhattacharya and Graham, 2007; Bhattacharya and Graham, 2009; Charfeddine and Elmarzougui, 2010; Cornett et al., 2007; Navissi and Naiker, 2006) or mutual-fund-holding (Alessie et al., 2004; Chan et al., 2014; Griffith and Lund, 2019; Ma and Tang, 2019).

Regarding mutual fund holding, Del Guercio and Hawkins (1999) study the role played by pension funds in helping their firm with proposals. The authors document that such proposals help the firm with restructuring, lead to the sale of assets, and execute layoffs. In the same line, Duan and Jiao (2016) assert that mutual fund holdings use voting against management.

Regarding family holding, Maury and Pajuste (2005) examine the effect of family-controlled firms. The authors find that equal allocation of shares in family-controlled firms leads to better performance because individuals are more likely to contest to extract PBC than any other type. Moreover, the interplay between MLS is significantly affected by the type of shareholders. In firms dominated by families, a competing family block reduces firm performance. However, when the competing block is institutional, firm performance increases. In the same line, Laeven and Levine (2008) support that the identity of large shareholders may help in explaining the positive impact of the presence of MLS. For example, different types of owners are less likely to form controlling coalitions. Moreover, the authors find that family blocks can monitor management closely, thus reducing or eliminating type one agency conflict, leading to better firm performance.

In addition, Villalonga and Amit (2006) conducted a study on Fortune 500 firms from 1995 to 2000. The study examined family blocks with the coexistence of other blocks, mainly institutional blocks. The authors find that family ownership benefits all shareholders if the founder is still in charge of the firm. However, family ownership destroys performance when the responsibilities are passed to the founder’s second generation. The same result holds even if the founder serves as a chairman. In addition, the founder enhances firm performance if no control mechanisms are exercised. Regardless of how control is exercised, the founders’ second generation, who serves as CEOs, negatively affects performance. However, this negative effect

is solely attributed to the second generation only. The authors find that third-generation adds value to the firm, suggesting a non-monotonic impact on the founder's descendants. Villalonga and Amit (2006) conclude that if the firm's founder is in charge, firms with type one agency conflict are worse than family-held firms. But, if the founder's second generation is in charge, firms that suffer from type one conflict are better.

Regarding institutional holding, Cheng et al. (2010) extend the voice method argument to another form of more aggressive action that involve ex-post legal remedies. Cheng et al. (2010) assert that institutional investors are more likely to lead the plaintiff in a class-action suit. Also, they find that cases that involved institutional investors have higher success and higher monetary returns. In addition, Chhaochharia and Grinstein (2009) show the importance of institutional investors in lowering CEO pay. After controlling for exogenous regulatory requirements of both NYSE and Nasdaq listing rules, they find that BoD independence decreases CEO pay in firms with a higher presence of institutional investors. The results indirectly support the efficient-monitoring effect.

Chen et al. (2007) examine the role of institutional investors in mergers and acquisitions performance. They find that the presence of institutional investors is associated with positive mergers and acquisitions performance. The positive effect is only associated with active and long-term institutional investors. Also, the effect is more pronounced when the size of the block is large. Institutional investors with small block sizes and lower retainment periods exhibit insignificant performance effects on mergers and acquisitions.

McCahery et al. (2016) surveyed 143 institutional investors to understand how they use voice interaction. The authors report that 63% of the respondents directly communicated with the management team. In addition, 45% of the respondents were involved in discussions with the board without the presence of the management team. In total, 30% of the respondents were engaged in both jawboning and aggressive actions. Also, McCahery et al. (2016) report that voice engagement is more executed by long term investors and in situations that involve the firm strategies and overall governance.

These studies explicitly confirm that shareholders have long-term investment strategies in which the return comes in the form of PBC. Also, since block holding is a long term investment strategy, intervention is not used for short-term gain, as outlined by Bebchuk et al. (2015). Another implication is that PBC are well extracted using a long-term approach accompanied by a voice channel. In addition, activism by institutional investors is related to two factors:

retainment periods of the block and the size of the block. In addition, as active institutional investors can enhance performance, they will have the ability to distinguish bad mergers and acquisitions. Institutional investors have a distinguished ability over other types of large shareholders in executing successful mergers.

Finally, some studies have addressed MLS homogeneity. For example, Cronqvist and Fahlenbrach (2009) employ the disaggregated model to understand whether the presence of a particular block is associated with certain firms' policies. Their results confirm that shareholders' heterogeneity affects firms' financial and investment policies and performance. In more detail, they find that active pension funds and corporations have a significant fixed effect after controlling for firm-level attributes. The addition of the fixed effect of the block heterogeneity improved the quality of the model. Nonetheless, the fixed effect is present with certain types, such as activists, pension funds, and corporations.

Cronqvist and Fahlenbrach (2009) outline an important implication for the role of large shareholders. Their results align with the exit, voice, and cost of large shareholders models. For example, leverage can either enhance or distress firm performance. Therefore, if leverage improves performance, it can explain the efficient-monitoring effect through voice or exit. On the other hand, if it distresses performance, it can explain the entrenchment effect of large shareholders. However, one may propose that the results are inherent from natural selection employed by large shareholders for firms that fit with their strategic investment, not by an actual influence of a particular block.

Becker et al. (2011) deny such a claim and confirm that large shareholders fixed effect comes from influence, not natural selection. They study the effect of the geographical location of large individual shareholders as an instrument for their presence. The results show that large shareholders who live in the same state as their firm headquarters significantly affect firm performance. The effect is present only through the particular block of each individual and not through any other means.

## **2.6 Conclusion**

This chapter provided a theoretical and empirical understanding of the role of large shareholders within the configurational approach. This chapter provided that ownership structures in which shares are diffused among a sea of owners are not the common case. Public firms are dominated by the presence of LCSs and MLS, who can impose control. Their presence created a new type of agency conflict in which the conflict became more pronounced

between large shareholders. The chapter revealed that large shareholders seek to concentrate their holding to secure private PBC by using the exit and voice intervention methods. However, the free-rider problem supports that these two methods are limited if the intervention costs are higher than the required PBC. Therefore, upon the presence of large shareholders, they can provide two contrasting roles. The positive role is accomplished when large shareholders can mitigate the type two agency conflict and produce an efficient monitoring effect. On the other hand, the negative role is attained when large shareholders increase the type two agency conflict, producing an entrenchment effect.

The chapter argued that scholars base their logic of the relationship between large shareholders and firms' outcomes and attributes on one premise: the direct link between large shareholders and type two agency costs. Many theoretical models link large shareholders' presence, number or relative power to firm outcomes and attributes through their role in agency conflicts. Alternative theories come into place to provide other links within the configurational approach of CG. Overall, the chapter supported the adoption of a pluralistic approach when applying the disaggregated view of large shareholders. The chapter concluded with remarks on empirical studies on the effect of MLS presence and type on firm-level attributes and outcomes.

## **Chapter 3 : Institutional setting: the Alternative Investment Market**

### **3.1 Introduction**

Many regulations have been enacted to provide a protection framework to shareholders. Some of these regulations have taken only an "ex-ante" role by setting the methods and means to exercise some transactions that involve a conflict of interest. Others have taken active "ex-post" steps to protect shareholders by offering them the option to exercise their legal rights against the mismanaging of management or large shareholders. In this regard, Becht et al. (2003) state that "the fundamental issue concerning governance by shareholders today seems to be how to regulate large or active shareholders to obtain the right balance between managerial discretion and small shareholder protection". This view supports the importance of research with an emphasis on the role played by large shareholders

In more detail, a conceptual understanding of the legal system can strengthen ownership research in many ways. First, the legal system includes the rights and responsibilities of all stakeholders. Thus, conceptual understanding can enhance studies within the boundaries of agency and stakeholder theories. Second, legal systems outline the terms of wealth distributions, voting power, and intervention rules. Thus, it can help shape studies of the disaggregated view of ownership structures. Third, since all legal systems mandate disclosure and transparency, a conceptual understanding can help in shaping external auditors' work. Fourth, legal systems influence monitoring rules among all external mechanisms. In this regard, Edelman (1990) advocates that firms adopt CG practices by enforcement and eventually consider these as best practices. In other words, legal systems take coercive actions that cognitively turn to guidelines over time.

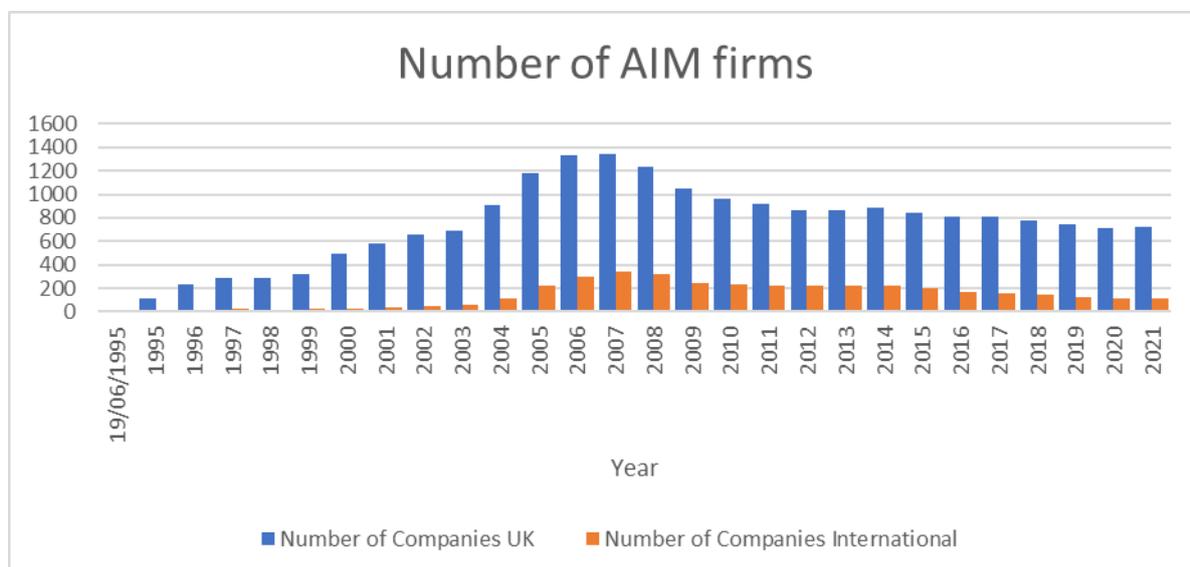
This chapter aims to establish a widespread understanding of the institutional setting for this study. The main purpose of this chapter is to link AIM to the objectives of this study. The chapter starts with an illustration of the AIM's history and success. Then, the chapter adds more information about its main features, sectors, participants, and governance regulations. Later in this chapter, the chapter provides how AIM can be linked directly to the research objectives and questions.

### **3.2 AIM's history, success, and competitors**

According to the AIM Rules for Companies (2016), AIM started its operation in June 1995. The primary purpose of this market is to provide an opportunity for SMEs to be listed and

traded in a multilateral trading facility without engaging in the complex requirements specified in the main London Stock Exchange (hereafter LSE main). AIM gives its companies the benefits of minimal regulation and access to growth capital. Although the market is based in the United Kingdom, AIM does not require its firms to operate in the UK. This ease of listing requirements and minimal regulation has attracted many companies around the globe. AIM started with only ten companies in 1995 with £82 million of market capitalisation. From 1995 to 2021, the market has attracted many companies operating in more than 28 countries. By 2021, the market reached a record with a total sum of capitalisation surpassing £146.6 billion. Figure 3-1 shows the number of AIM firms<sup>15</sup>. The following sections provide more information about AIM.

**Figure 3-1 Summary statistics for the AIM since its launch.**



### 3.2.1. AIM migration and formation

Corporations can generally raise long-term finance through direct listing in any stock market. These stock markets are centralised and regulated, which guarantees that financial instruments are being traded quickly, safely, and transparently. Usually, centralised markets come with high costs. For example, LSE main has strict entry and trading requirements, preventing SMEs companies from raising capital from final markets. However, another option exists in some countries, where firms can raise long term equity using alternative markets such as "Over-The-Counter" (hereafter OTC) markets. For example, SMEs in the United States can benefit from OTC markets to help secure some long-term equity. However, these markets are

<sup>15</sup> AIM factsheet November 2021. Retrieved from: <https://www.londonstockexchange.com/reports?tab=aim>.

less regulated, and their financial instruments are exchanged via a network of dealers. Therefore, OTC markets are less transparent for many investors.

According to Hutchinson et al. (1988), raising equity for SMEs was an issue in the UK before 1980. The situation was described as a finance gap for SMEs that reached maximum use of short-term finance sources and were ready to acquire long term equity. Recommendations from the Bolton committee (1971) and Wilson committee (1979) initiated the opening of the Unlisted Securities Market (hereafter USM) in 1980.

These recommendations were motivated by a decline in the LSE main market's new listings in the 1970s (Hutchinson et al., 1988). The main difference between the USM and the LSE main is that securities are not officially listed. Hence, trading is executed either in house by a stockbroker or negotiated with another stockbroker. Moreover, in contrast to the official listing, the USM provided an arena for companies to benefit from less rigid requirements and a cost-efficient environment because the USM did not require any public advertising or underwriting (Hutchinson et al., 1988).

According to Hutchinson et al. (1988), the USM had enjoyed eight years of success between 1980 and 1987. During that period, the market attracted over 600 firms. The market was able to help 108 firms to advance to the main market. Along with the USM, another alternative market existed in the UK. The OTC UK market attracted people who seek tax relief since its shares are considered unquoted by tax authorities. The USM reached an end in 1993 due to two factors (Arcot et al., 2007). First, during the late 1980s and early 1990s, the UK and the rest of the world were shocked by a severe recession that sharply affected the new listing in the USM. Second, regulators had made some amendments that affect the attractiveness of the USM. For example, the European Commission adopted a new listing requirement about the trading period on the LSE main and the USM. The trading period was cut off from five to three years for the main market. Also, the trading period was cut off from three years to two for the USM. Such amendments influenced the new listing decisions for investors since it was better to wait another year to be listed in the main market. In addition, the Exchange relaxed the listing requirements for biotechnology firms which allowed these firms to be listed without the strict regulations.

However, the need for an alternative market that raises capital aroused opposition from some specialised banks and brokers. Eventually, the Exchange announced the launch of the AIM to replace both the USM and the OTC UK. The AIM was introduced to fill a gap for high-

growth entrepreneurial firms. The intention was to introduce a separate market from the official market and have its regulatory approach.

### **3.2.2. AIM's success and the failure of European alternative markets**

AIM was first introduced to provide an opportunity to help entrepreneurial firms. Therefore, it was not introduced to compete with other markets that focus on some industries, such as the NASDAQ in the US, which target high-technology firms. However, the idea to launch a market to compete with the NASDAQ had attracted the European Commission. The Investment Services Directive, passed in 1993, made it possible for such a market (Weber and Posner, 2000). The Investment Services Directive asserts that one country can manage stock exchanges and operate on a pan-European basis. In 1996, a European market called the EASDAQ started trading in Brussels. Other European countries launched their alternative markets. The Paris Stock Exchange started the Nouveau Marche trading in France in March 1996.

In addition, other countries launched their alternative markets, such as Belgium (Euro NM), Italy (Nuovo Mercato), and the Netherlands (Nieuwe Markt). Eventually, all these three Exchanges merged into one market called Euro NM. The Euro NM was launched to support one purpose: the ability to permit cross-border trading and limit the regulation on a country basis. Following the same purpose, Germany started the Neuer Markt. In this regard, (Weber and Posner, 2000) comment that "vested interests from the national financial systems, with the support of their governments, created these new markets to divert the challenge that EASDAQ posed to nationally based, quasi-monopolistic arrangements" (Weber and Posner, 2000, p. 554).

These markets had enjoyed success and outperformed the AIM in the late 1990s (Arcot et al., 2007). For example, the Neuer Markt successfully attracted new IPOs and hit a record attracting 168 IPOs in 1999. The public saw an opportunity for a high growth market, while institutional shareholders considered it a casino (Burghof and Hunger, 2003). However, the LSE decided to attract high technology firms by launching the techMARK index in 1999 to advertise that the main market has strong technology firms. Also, the LSE opened the door for technology firms and lessened the listing requirements as it was granted for biotechnology firms in 1991.

AIM competitors reached an end due to the Dot-com Bubble collapsing in March 2000. AIM managed to survive for the following reasons (Arcot et al., 2007). First, AIM managed to

diversify its industry listing, which helped undermine the effect produced by the Dot-com Bubble on technology firms. At the time of the Dot-com Bubble, technology firms account for only 20 per cent of the market. Second, AIM attracted many institutional investors with clear strategic planning for block holding investments.

Nonetheless, AIM was affected by the collapse of other markets and the Dot-com Bubble and hit its lower index point below 500. To overcome the impact of the Dot-com Bubble, AIM started to focus on international firms. Figure 3-1 shows that international firms' admission gradually rose to its height in 2007.

### **3.2.3. AIM rivals: differences and similarities**

The last section outlines AIM's success and the failure of other European financial markets. After the Dot-com Bubble, AIM continued to grow and eventually became an anchor in attracting international firms. In a comparative study between the major New York exchanges and the two UK exchanges (LSE Main and AIM), (Doidge et al., 2009b) find the following results. First, in 1998, major New York exchanges outperformed the UK exchanges in terms of listing new international firms. In this regard, 31% of international firms chose the New York exchanges. On the other hand, only 16% chose the UK exchanges. The results (Doidge et al., 2009b) suggest that the New York exchanges outperformed the UK exchanges by around 50%. However, (Doidge et al., 2009b) reveal that when comparing the two main exchanges, the New York exchanges surpassed the UK Main Market by 93%. Therefore, one can notice the impact of AIM in helping the UK attract international firms. AIM decreased the percentage between the New York exchanges and LSE main by 43%. The situation continued to prevail in 2005. (Doidge et al., 2009b) shows that the New York exchanges exceeded the LSE main by 165% of international new listings. Again, AIM helped to shrink the percentage to 60%. This confirms the success of AIM in attracting international firms and reflects the good reputation of AIM internationally.

Although AIM and NASDAQ are considered the most successful alternative markets (Granier et al., 2019), their regulation models are different. NASDAQ is closer to the LSE main regarding the regulation model. The government regulator, not the Exchange, is responsible for setting the rules. In AIM, the Exchange is responsible for setting the principles. As the two terms suggest, the rules must be followed while the principles enlighten and guide firms to apply best practices. In NASDAQ, firms are required to adhere to strict government requirements that apply to large public firms, which exerts a burden on SMEs. Therefore, the

regulation model affects listed SMEs' entry requirements and prosperity. For example, AIM provides cost-efficient requirements compared to NASDAQ (Mendoza, 2008). Also, AIM had more new listings between 2000 to 2008 than NASDAQ. AIM outperformed NASDAQ by 57.5% in 2005. In terms of money raised, in 2006, the aim raised over 14.2 billion compared to 12.8 billion on NASDAQ (Mendoza, 2008).

Another rival for AIM is Euronext Growth. Like AIM, Euronext Growth caters for SMEs, and it is a pan-European market that mainly operates in Amsterdam. Euronext Growth has many similarities with AIM regarding regulation model and listing requirements. However, Euronext Growth requires at least 2.5 euros million to be available for public trading. Since its launch on the 17th of May 2005, the market has been a hub for SMEs in Eurozone. As of 2020, Euronext Growth aggregated market capitalisation reached 254 billion euros<sup>16</sup>.

In addition, the UK Financial Conduct Authority and France's Autorité des Marchés Financiers cooperated and launched two markets, namely the Aquis Exchange UK and the Aquis Exchange Europe. The Aquis Exchange UK is divided into two markets: Aquis Stock Exchange (AQSE Main) and Aquis Stock Exchange Growth Market (AQSE Growth). By 2020, AQSE Growth was divided into AQSE Access and AQSE Apex. Both AQSE Access and AQSE Apex are modelled similar to AIM. However, AQSE Access is the first point for SMEs, while AQSE Apex is designed for established SMEs with clear growth strategies<sup>17</sup>.

Finally, LSE tried to replicate its AIM experience in Japan. In June 2009, TOKYO AIM, Inc -a joint venture between the LSE and the Tokyo Stock Exchange- started Tokyo AIM. Tokyo AIM mimics the principle-based system used in the UK AIM. Moreover, Tokyo AIM uses the Nominated advisors to oversee corporate governance reliability. The LSE withdrew from the joint venture, and Tokyo AIM operated under Tokyo Stock Exchange, Inc, with the same principles under the name TOKYO PRO Market. However, the market has struggled to attract new listings as the listing average is 2.4 between 2012 and 2016<sup>18</sup>.

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16 Finance your growth as an SME. Retrieved from: <https://www.euronext.com/en/raise-capital/sme>.

17 AQSE Apex RuleBook. Retrieved from: <https://www.aquis.eu/aquis-stock-exchange/rules-and-regulations>.

18 Overview of TOKYO PRO Market. Retrieved from: <https://www.jpx.co.jp/english/equities/products/tpm/outline/index.html>

### **3.3 AIM regulatory framework**

AIM firms have many obligations to several authorities. The starting point for legal reference for firms incorporated in the UK is the Companies Act 2006 (hereafter the Act). In this regard, the Act affirms six primary obligations for AIM firms. In addition, the LSE provide the second reference point for legal duties. The LSE issued three types of rules, namely, AIM Company Rules, Nominated Adviser Rule, and London Stock Exchange Rules for member firms. The first two sets of rules concern disclosure, transactions, and AIM compliance. This section describes the legal framework set out in the Act and by the LSE.

The Act affirms six main obligations for AIM firms. First, the Act assures the importance of the company constitution and association. Part one Section 4.2 describes public companies as any company owned by shares. In addition, The Act, Part 2 (sections 9.1 to 9.5) outlines that the main statute for any firm is established in its articles of association. The articles of association establish the grounds for information such as shareholders' and directors' core duties and obligations. The second obligation is related to the directors' duties and behaviour. In this regard, the Act, Part 10 (Chapter 2 Section 17 to 177) specifies seven responsibilities for the directors. In general, these duties assure due diligence and independence.

The third obligation relates to pre-emption rights. The purpose of the pre-emption rights is to protect existing shareholders from any potential decrease in their total holding after a secondary offering. The Act, Section 561 specifies that "A company must not allot equity securities to a person on any terms unless: (A) it has made an offer to each person who holds ordinary shares in the company to allot to him on the same or more favourable terms a proportion of those securities that is as nearly as practicable equal to the proportion in nominal value held by him of the ordinary share capital of the company, and (B) the period during which any such offer may be accepted has expired, or the company has received notice of the acceptance or refusal of every offer so made" (Parliament, 2006).

For the LSE main, the Financial Reporting Council (hereafter FRC) issued the pre-emption group principles in which it specifies a certain threshold available to the public for cash issuing. The pre-emption group principles assure a 5% threshold of the issued ordinary share capital to cap any new issuing in any given year. Moreover, the pre-emption group principles assure a 7.5% threshold of the issued ordinary share capital to restrict any new issuing in a three-year rolling period. Finally, the pre-emption group principles limit the share discount to 5% of the original share price. For AIM firms, these rules do not apply. AIM's

current shareholders can exploit any secondary offering authorised at the annual general meeting without a prospectus. Also, the AIM Rules impose no limit on the share discount of any secondary equity offering.

The fourth obligation relates to CG. The Act (Section 172) briefly mentions CG in the form of duties that promote the company's success. Such duties include interaction with stakeholders and insiders. In practice, AIM firms are subject to the concept "comply or explain"<sup>19</sup>. Therefore, the application of CG standards can vary among firms. However, most AIM firms adhere to the Quoted Companies Alliance (hereafter QCA), which provides 12 key principles more applicable to SMEs. In this regard, QCA affirms that 89% of AIM firms adhere to these 12 key principles, while 6% follow the UK Corporate Governance Code (the Code)<sup>20</sup>.

In addition, AIM rules for companies require the supervision of the Nomads. In this regard, the Nomads are specialised firms with relevant expertise in AIM. Moreover, Nomads must be approved by the Exchange. The main role of the Nomads is to provide ongoing supervision, starting from admission to AIM to applying appropriate corporate governance best practices.

The fifth obligation relates to financial reporting in annual accounts. The Act (section 393) outlines the duties related to the financial statements. The Act specifies that the directors are responsible for the fairness and accuracy of the annual accounts. In the same line, auditors must affirm the responsibility of the directors for the fairness and accuracy of the annual accounts.

Finally, the sixth obligation relates to the disclosure of block holding. The Act, Part 21A, the Disclosure Guidance and Transparency Rules chapter 5 (DTR5), and AIM Rule 17 assure the reporting of block holding based on certain thresholds. The responsibility of the disclosure resides in the hands of both the shareholders and the firm. Before June 2017, DTR5 applied only to firms incorporated in the UK. However, on the 26<sup>th</sup> of June 2017, the 4<sup>th</sup> Anti-Money Laundering Directive took effect in the UK. Hence, DTR5 applies to all UK-registered companies. These three rules have an enormous impact on the definition of large shareholders in this study. First, the Act introduces the term "the people with significant control" and

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<sup>19</sup> A guide to the aim. Retrieved from: <https://docs.londonstockexchange.com/sites/default/files/documents/a-guide-to-aim.pdf>.

<sup>20</sup> The Quoted Companies Alliance. Retrieved from: [Which corporate governance codes do AIM companies apply? | The Quoted Companies Alliance \(theqca.com\)](https://www.theqca.com/which-corporate-governance-codes-do-aim-companies-apply/)

specifies DTR5 for more clarification. DTR5 indicates several thresholds for disclosure ranging from 1% to 100%. In this regard, DTR5 asserts only the mandatory disclosure without defining what constitutes a large shareholder. AIM Rules for Companies elaborate on these definitions and provide three distinct thresholds, namely 3%, 10%, and 30%. These thresholds are used to define large shareholders. The next chapter elaborates more on these thresholds and links them to the definitions of the ownership structure variables.

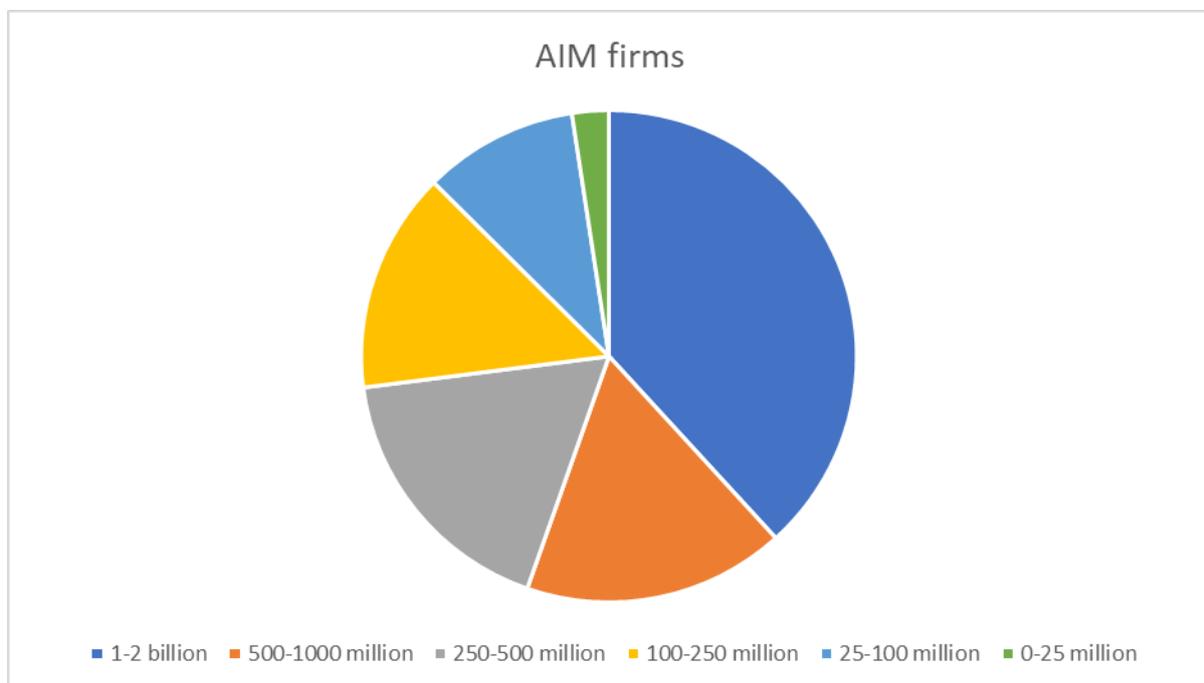
### 3.4 AIM features and regulatory framework

So far, the chapter has outlined the history of AIM, its features, and its regulatory framework. The following two sections outline these aspects.

#### 3.4.1. AIM: a market for SMEs

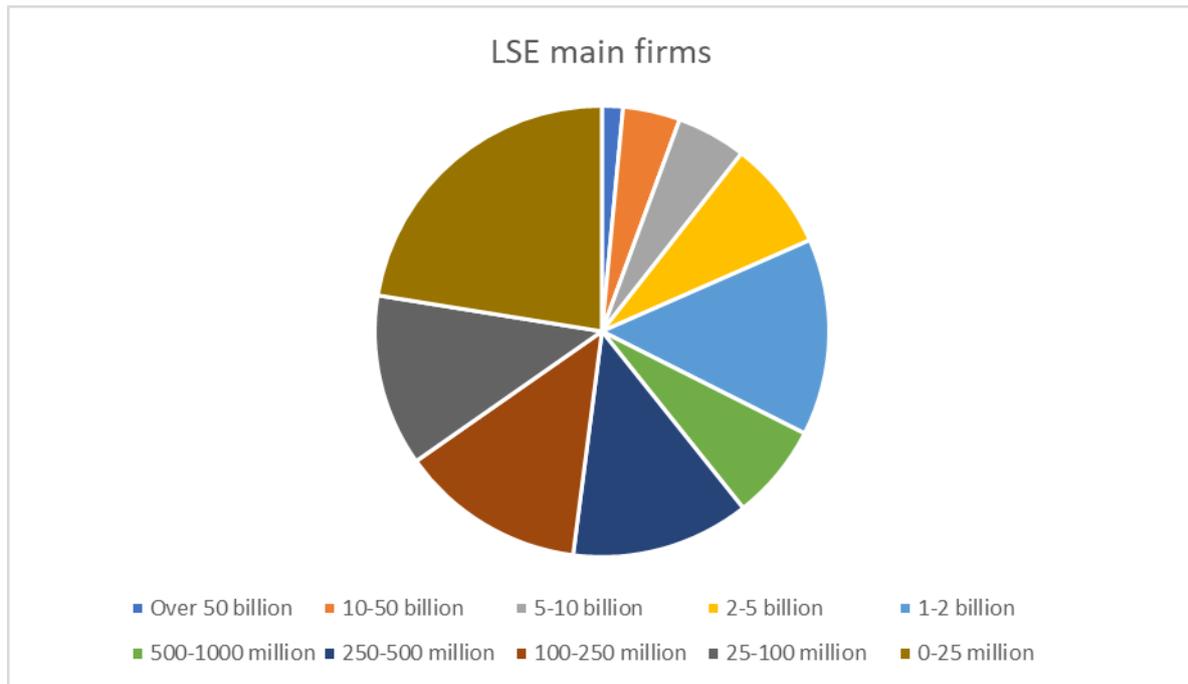
Figure 3-2 and Figure 3-3<sup>21</sup> show companies' distribution by equity market value. One can notice that 72.4% of the AIM firms are below 100 million compared to 51.7% of the firms in the LSE Main. In addition, LSE main has the lead for large listed firms. Figure 3-3 shows that 32.7% of the firms are above one billion in LSE Main. These numbers reflect that AIM has reached a maturity stage and is still a leading market for SMEs over time. Overall, Figure 3-1 and Figure 3-2 outline the first distinctive feature of AIM compared to other markets.

**Figure 3-2 Equity Market for AIM firms**



<sup>21</sup> AIM factsheet November 2021. Retrieved from: <https://www.londonstockexchange.com/reports?tab=aim>.

**Figure 3-3 Equity Market for LSE Main**



### **3.4.2. AIM's distinctive regulatory framework**

From section 3.3, one can understand that AIM operates on three pillars. First, AIM produces fewer rigorous requirements for listing, including no requirement for the trading record. Second, AIM does not require a minimum percentage of public holding. In other words, the firm can be held by only large shareholders with no minority shareholders. Third, AIM provides a self-dealing corporate governance guideline in which the firm's governance is assigned to Nomads. The Nomads are professional advisory firms such as investment banks, brokers, or auditing firms. They present to imitate the role of sponsors in the LSE main, and they have superior decision power to assert the suitability of CG standards.

However, in the main listing, the last word on the application of CG resided in the hand of the Listing Authority. Overall, the Nomads play a distinctive role in which they help firms to adhere to CG and help the Exchange ensure high transparency and integrity. Table 3-1 summarises all AIM features.

**Table 3-1 Summary of the AIM advantages and differences compared to the Main Market 22**

<b>Key reasons why SMEs choose to join AIM</b>	
Balanced regulation: AIM's balanced regulatory environment is specifically tailored to support the needs of smaller companies	
International investor base: Access to a wide and diverse range of institutional and retail investors	
Geographical reach and wide sector coverage: The diversity of sectors and regional coverage on AIM, with companies from 40 different industries from over 28 countries	
Expert adviser network: A large and experienced community of expert advisers to help companies join AIM and support them once they are trading on the market	
Visibility and profile: With customers, suppliers, investors and other key stakeholders	
<b>Differences between admission criteria and continuing obligations for the AIM and the Main Market</b>	
<b>The AIM</b>	<b>The Main Market</b>
No minimum market capitalisation	Minimum market capitalisation
No trading record requirement	Normally three-year trading record required
No prescribed level of shares to be in public hands	Minimum 25 per cent shares in public hands
No prior shareholder approval for most transactions*	Prior shareholder approval is required for substantial acquisitions and disposals (Premium Listing only)
Nominated Adviser required at all times	Sponsors needed for certain transactions (Premium Listing only)
Admission documents are not pre-vetted by the Exchange or by the UKLA in most circumstances. The UKLA will only vet an AIM admission document where it is also a Prospectus under the Prospectus Directive	Pre-vetting of a prospectus by the UKLA
* unless the transaction is a reverse takeover or disposal resulting in a fundamental change of business	

### **3.5 Summary**

This chapter provides an overview of the institutional setting of this thesis. The chapter intended to link AIM's features, CG framework, and legal environment to the main objectives of this thesis. The chapter established that AIM is a secondary market operating under the LSE. The chapter outlined AIM's history from its launch in June 1995 and covers many stages of success until now. The chapter assured that AIM's success is due to its lower listing requirements and relaxed regulations. Such a model has attracted many UK firms and

<sup>22</sup> Adopted from A guide to AIM- (LSE, 2010). Retrieved from: [https://www.lseg.com/sites/default/files/content/documents/A\\_Guide\\_to\\_AIM.pdf](https://www.lseg.com/sites/default/files/content/documents/A_Guide_to_AIM.pdf)

intentional firms. Finally, the chapter provided the legal framework of AIM and linked it to the study's objectives.

## Chapter 4 : Data and Methodology

### 4.1 Introduction

This chapter outlines the data and methodology of the three empirical chapters. First, it starts by presenting the data source and collection process. Then, it outlines the procedures used to choose the sample. Moreover, the chapter provides definitions of the variables used in the analysis. Finally, it outlines the main estimation method and justification for its use.

### 4.2 Data source and data collection process

#### 4.2.1. Data source

As mentioned in chapter one, this research examines the relationship between MLS and three aspects of firm-level attributes and outcomes, namely firm performance, audit fees, and corporate debt maturity. Therefore, the study requires ownership data and financial data. The primary source for the data is the Fame database. Fame -powered by Bureau van Dijk (hereafter BvD)- provides a complete ownership database focusing on shareholding chains. It has over 119 million active and 687 million archived links, respectively. When applicable, Fame offers indicators of firms' independence. The indicator is based on tracing each block with 1% or more of the total direct holding to its ultimate owner. BvD assigns each shareholder with an identification number that specifies the percentage of ownership, name, type, and nationality, among other identifications.

In addition, Fame presents the ultimate voting rights in two percentages: direct and total. The direct percentage is a link that describes a relationship between two entities: A and B. The direct percentage is the simplistic form of ownership links. It shows that entity A owns a certain percentage of company B. In this case, the cash flow rights are the same as ultimate voting rights. The total percentage<sup>23</sup> results when entity A has a total stake in company B. In this case, Fame does not specify a direct path in which the ownership is held; but it reports the final calculation.

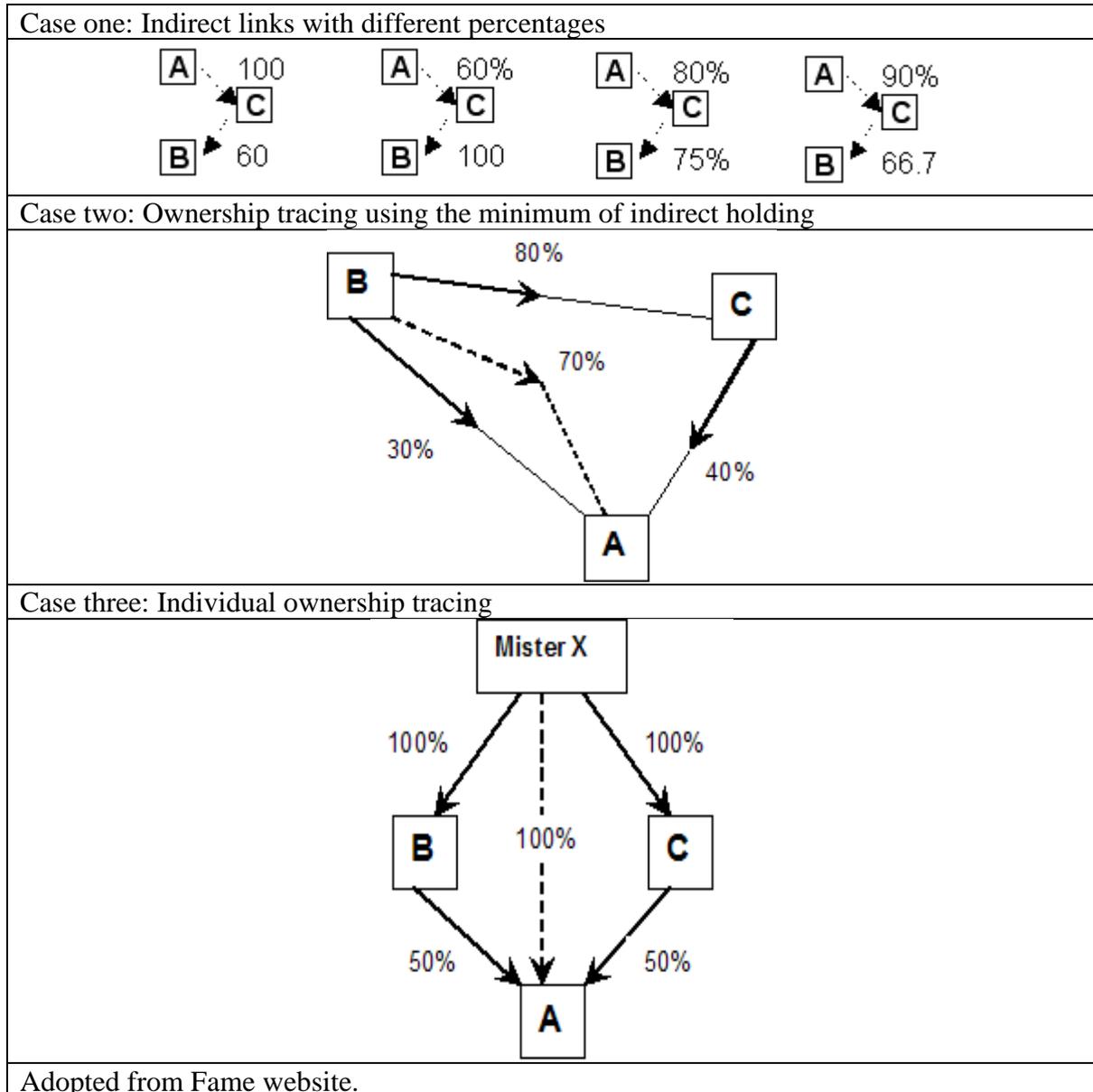
Figure 4-1 shows three cases that describe the tracing of indirect links. In the first case, Firm B is the unit of analysis. In Figure 4-1 (case one), entity A owns 60% of the total holding of firm B, regardless of the differences in percentages. Fame calculates the total percentage

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<sup>23</sup> Fame only report tracing graphs for ultimate owners in the UK. When ultimate owners are listed outside the UK, Fame reports the final percentage using the calculation method used in

based on the total shares irrespective of the shareholding path (i.e. whether it is direct or indirect).

**Figure 4-1: Total voting rights calculation using indirect tracing**



In addition, Figure 4-1 (case two) shows that entity B (corporate) owns directly and indirectly in Firm A. In this case, Fame shows only the total percentage, which is 70%. Fame calculates the percentage considering that Firm B is the ultimate owner of C based on the 50% threshold. Once Fame identifies the ultimate owner, it calculates the total voting rights using the minimum of indirect holding.

Finally, Figure 4-1 (case three) presents another case that describes a relationship between one individual and entities. Mister X owns 100% of both B and C. Therefore, Mister X is the

ultimate owner of both firms based on the 50% threshold. Hence, the total percentage is the sum of lower percentages (50% from B to A and 50% from C to A).

#### **4.2.2. Threshold definition**

The last subsection illustrates how Fame presents the ultimate voting rights using the procedure pioneered by Claessens et al. (2000), Faccio and Lang (2002), and La Porta et al. (1999). Fame uses a wider threshold for each listed firm by determining block holding at the 1% threshold. Such an identification gives a robust identification of LCSs and MLS compared to most studies such as Attig et al. (2006) and Ben-Nasr et al. (2015). These studies start with the 10% direct voting threshold to trace the ultimate voting rights. Nonetheless, Edmans and Holderness (2017) state that research on MLS should consider alternative thresholds as there is no consensus on the definition of MLS. In essence, Edmans and Holderness (2017) urge researchers to consider lower thresholds when possible. More specifically, Edmans and Holderness (2017) state that "An alternative approach is to acknowledge that theory offers little guidance and instead determine what percentage ownership levels appear to be relevant empirically" (Edmans and Holderness, 2017, p. 549). Following this recommendation and the availability of tracing at the 1% threshold, Thus, this study follows Cai et al. (2016) and Konijn et al. (2011) and considers the 5% threshold. The study considers the 10% threshold as an attentive to the main analysis. The results based on the 10% threshold are provided in **Appendix C**.

#### **4.3 Sample selection criteria**

The initial sample comprises all active FTSE AIM-listed firms available in the Fame database over the 2010-2019 period. The study period is chosen to eliminate any possible effect of the exogenous crisis during 2007-2009. The data has been constructed multiple times, and the last version was constructed in July 2021. As of July 2021, AIM firms operate in nine sectors<sup>24</sup>: Oil and Gas, Basic Materials, Industrials, Consumer Goods, Health Care, Consumer Services, Telecommunications, Utilities, Financials, and Technology. Also, AIM firms trade in three indexes: FTSE AIM All-Share, FTSE AIM 100 Index, and FTSE AIM UK 50 Index. This study excludes (1) financial and utility firms with Industry Classification Benchmark (ICB) codes: 3010, 3020, and 6510.; (2) delisted firms because of missing ownership data over

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<sup>24</sup> Based on the Industry Classification Benchmark (ICB). The ICB was launched in 2005 and enhanced in 2019 to include the Russell Global Sectors (RGS) classification scheme.

the entire period; (3) and firms with less than four usable observations during the sample period. The final sample includes 670 firms. Table 4-1 summarises the selection process.

**Table 4-1 Sample selection process.**

Process	Firms
All FTSE AIM-listed firms that are available in Fame2010–2019 period.	774
Financial firms	73
Utility firms	8
Delisted firms	23
Final sample	670

#### **4.4 Definitions of the variables**

This section illustrates the definitions of the variables used in the following three empirical chapters. As previously stated in the literature review chapter, this study investigates the effect of MLS on three dependent variables: firm performance, audit fees, and corporate debt maturity, respectively. This study takes a pluralistic and disaggregated view by employing three ownership structure proxies: the presence, number, and relative power of MLS, respectively. Furthermore, the study considers the type (identity) of the firm's largest three shareholders who hold 5% or more of the ultimate voting rights. It is important to note that this section provides only the definitions of the variables used with references to similar studies that adopted the same definitions. However, the model specifications (provided in each empirical chapter) section illustrates extensive explanations of each empirical chapter's expected relationships. The following sub-sections define the independent, dependent, and control variables used in this study. A summary of these variables is reported in **Appendix A**.

##### **4.4.1. Independent variables for the presence, number, and power of MLS**

Regarding ownership structure variables (*MLSVAR*), ultimate voting rights accurately reflect power and control (La Porta et al., 1999). Thus, the voting rights of the first five large shareholders are used to calculate three proxies for presence, number, and relative power, respectively. Using the LCS voting rights and the first four MLS is not arbitrary. As a preliminary step, the study adopts the largest four shareholders in line with Ben-Nasr et al. (2015). However, since this study differs from Ben-Nasr et al. (2015) in the definition of MLS, the inclusion of another MLS can accommodate the dominant presence of MLS in AIM.

Nonetheless, the calculation of *MLS5* is the same regardless of the number of MLS because the definition considers only the first two MLS. Regarding *Hdis5*, the inclusion of an additional MLS only brings a lower impact on the final calculation, given the similarities between voting

rights when reaching a lower threshold. Based on this discussion, the study uses the following independent variables:

*MLS5*: The presence of MLS is the starting point to understanding how MLS affect their firms. The variable reflects whether the firm has two large shareholders behind the LCS at the 5% threshold. The main role of *MLS5* is to understand which role MLS play, as MLS can bring either an efficient monitoring effect or an entrenchment effect (Attig et al., 2009; Ben-Nasr et al., 2015).

*Number5*: This variable calculates the number of MLS behind the LCS up to the fourth. The number of MLS sheds light on how MLS interact with each other. In this regard, MLS can form a coalition in line with the entrenchment effect (Bennedsen and Wolfenzon, 2000) or provide extra monitoring in line with the efficient monitoring effect (Gomes and Novaes, 2006).

*Hdis5*: The relative size of MLS is an important part of expanding on control contestability situation versus coalition formation process. In this regard, Maury and Pajuste (2005) assert that continuous measures can enhance the quality of the analysis. Therefore, this study employs the Herfindahl dispersion measure which equals the sum of squares of the differences between the largest five shareholders. In more detail, *Hdis5* measures the relative power of each block, and it ranges from zero to 100. For example, a low *Hdis5* (closer to zero) means that all blocks are relatively similar, while a zero *Hdis5* means that all blocks are the same size. However, high *Hdis5* (around 100) indicates that the first block is higher than the second block, and the firm has no presence of other MLS. The main purpose of using *Hdis5* is to understand the effect of block distribution among block holders. As Maury and Pajuste (2005) and Bennedsen and Wolfenzon (2000) outline, the coalition formation effect is more likely to exist if the blocks are relatively equally distributed.

*Maj30*: This is a dummy variable that equals one if the voting rights held by the LCS exceed 30%. The study adopts some additional tests to confirm the presence of the coalition formation effect. As provided in the regulatory framework, AIM defines majority shareholders as shareholders who hold 30% or more of the total holding. Therefore, the study employs an interaction term between *MLS5* and *Maj30* to see whether the interaction term produces the same effect as the stand-alone *MLS5*. Logically, if the interaction term has the same effect, one can confirm the coalition formation effect. Maury and Pajuste (2005) use a similar measure that reflects the opposite effect of the majority voting (i.e. high contestability). Their measure

is a dummy variable that equals one if the two largest shareholders cannot form a majority, and there is at least one more block holder (with 10% of the votes).

#### **4.4.2. Independent variables for the type (identity) of MLS**

Consistent with Claessens et al. (2000) and Faccio and Lang (2002), the type (identity) is allocated into two categories: family and institutional investors. A family is any individual owner or a group of individual owners linked by marriage or blood ties. Different individual members of the same family are aggregated into one percentage because it is assumed that those members will vote collectively. Thus, family ownership equals the total ownership of all family members.

In addition, the study adopts Brickley et al. (1988) definition and splits institutional ownership into two types, namely pressure-resistant and pressure-sensitive institutional investors. According to Bhattacharya and Graham (2009), the first group relate to "institutional investors that only have an investment relationships with firms in which they own equity. These include pension funds, mutual funds, endowments and foundations" (Bhattacharya and Graham, 2009, p. 373). Regarding the second group, Bhattacharya and Graham (2009) state that "pressure-sensitive institutional investors are likely to have both an investment and business relationships with firms in which they own an equity stake. These institutional shareholdings include equity holdings by insurance companies, banks, and non-bank trusts"(Bhattacharya and Graham, 2009, p. 373). The literature review chapter states that each type can bring different outcomes to the overall firm attributes and outcomes. Therefore, the type-related variables are used to add another dimension that explains the effect of MLS concerning the three dependent variables. As a starting point, the study confirms the main analysis by understanding the effect of MLS homogeneity. The following two variables are used to provide an in-depth understanding of the main results:

*Same12*: This variable captures the homogeneity of the first two shareholders. *Same12* is a dummy variable that equals one if the LCS and first MLS are from the same type and zero otherwise.

*Same123*: This variable considers the homogeneity of the first three largest shareholders. *Same123* is a dummy variable that equals one if the LCS and first two MLS are from the same type and zero otherwise.

Once the effect of MLS homogeneity is confirmed, the study uses the following variables to provide additional analysis on specific MLS types:

*FAM12*: This variable is a dummy variable that equals one if the LCS and 1st MLS are a family and zero otherwise.

*INS12*: This dummy variable equals one if the LCS and 1st MLS are pressure-resistant institutional investors and zero otherwise.

*Bank12*: This dummy variable equals one if the LCS and 1st MLS are pressure-sensitive institutional investors and zero otherwise.

#### **4.4.3. Dependent variables and control variables**

As established in the introduction chapter, the empirical analysis is divided into three chapters. The primary concern in the first empirical chapter is firm performance. The second empirical chapter focuses on audit fees. Finally, the third empirical chapter considers how MLS react to external monitoring bodies in the form of their reaction to corporate debt maturity choices. This thesis employs the following dependent variables:

*Return on assets (ROA)*: Many studies have considered this accounting measure to examine firm performance. The variable is the ratio of earnings before interest and taxes to the book value of assets at the beginning of the year (Boubaker et al., 2016; Dou et al., 2013)

*Tobin's Q (TQs)*: The variable is generally defined as the market value of total assets divided by the replacement cost of total assets. In calculating the replacement cost of total assets, the book value of debt is used as a proxy for its market value (Cai et al., 2016; Demsetz and Villalonga, 2001). Cai et al. (2016) argue that this definition eliminates any assumptions about depreciation and inflation rates.

*Fees*: Although AIM regulations allow listed firms to engage auditors in non-auditing work, this study seeks to understand the effect of MLS on the amount for auditing activities only. In this regard, Fame provides two distinct values regarding audit fees and non-audit fees. Therefore, the variable used in the analysis capture the correct amount paid to auditors for their auditing engagement efforts. The variable equals the natural log of audit fees in thousands of pounds.

*Debt1*: This study uses the difference between a firm's total liabilities and current liabilities divided by total liabilities as the main variable for corporate debt maturity (Ben-Nasr et al., 2015).

*Debt2*: This study uses long term debt scaled by total debt as the additional variable for corporate debt maturity (Ben-Nasr et al., 2015).

#### **4.4.4. Control variables**

This study uses many control variables. Each control variable is associated with a specific dependent variable, except the following two variables are used across all specifications:

*Size*: Proxy variable for company size measured in terms of the log of total assets. This measure is adopted in almost every ownership structure research (Ali et al., 2020; Anderson et al., 2003; Maury and Pajuste, 2005).

*Leve*: This measure is calculated using the book value of total long-term liabilities scaled by total assets (Cai et al., 2016; Maury and Pajuste, 2005). In the first empirical chapter, the study employs the following control variables:

*Tang*: This measure is concerned with asset tangibility. The measure is widely used in studies that consider ownership structure and firm performance, and it is calculated by dividing tangible assets over total assets (Boubaker et al., 2016; Cai et al., 2016; Maury and Pajuste, 2005).

*Grow*: The measure captures growth opportunities, and it is calculated as the percentage of sales growth (Cai et al., 2016; Maury and Pajuste, 2005).

*Age*: Following Boubaker et al. (2016), this study controls firms' age. The variable is calculated using the number of years since the firm's first incorporation date. Although Holderness (2016) outline that " the two firm-level factors that existing research suggests are most clearly related to ownership concentration, firm size and firm age.", few studies only considered controlling for the firm age. Moreover, since this study considers relatively new entrepreneurial firms, the inclusion of this measure is important when considering the type dimension. In this regard, Anderson et al. (2003) confirm that family holding is higher for young firms.

The second empirical chapter employs the following control variables to reflect on the client complexity and audit risk. These variables are adopted from both Barroso et al. (2018) and Ali et al. (2020) :

*Int-Sale*: The ratio of international sales divided by total sales.

*Inv-Rec*: The sum of inventories and accounts receivable scaled by total assets.

*CRatio*: The ratio of current assets to current liabilities at the end of the fiscal year.

*IFRS*: This dummy variable equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise.

*Loss*: This dummy variable equals one if the firm reports a net loss in year  $t$  (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise.

In the third empirical chapter, the study employs the following control variables:

*AMA*: following both Zheng et al. (2012) and Ben-Nasr et al. (2015), this measure captures the maturity of current and long-term assets, and it is calculated by taking the weighted average of the maturities of current and long-term assets.

*ANBE*: This measure captures abnormal earnings to proxy for firm quality. *ANBE* is calculated by dividing the change in EBITDA from year  $t$  to year  $t + 1$  by the market value of equity in year  $t$  (Barclay and Smith Jr, 1995).

*MTB*: This variable reflects on firms' growth opportunities, and it is calculated by dividing the market value of equity by the book value of equity (Ben-Nasr et al., 2015).

*ROA-sd*: This variable reflects firms' credit quality, and it is calculated using the standard deviation of the firm's *ROA* over the previous five years (Ben-Nasr et al., 2015).

#### **4.5 Endogeneity and ownership structure research**

Previous empirical studies on the role of MLS have considered three methods of estimations: Ordinary Least Squares (OLS), Pooled OLS (Maury and Pajuste, 2005), and fixed effect (Ben-Nasr et al., 2015). However, the reliability of these methods in MLS research is questionable. This section provides some econometric issues that call for adopting a more robust estimation method.

As stated in section 4.3, this study uses panel data (i.e. longitudinal data). The unit of analysis is based on two dimensions. The first unit is a single firm taken from all AIM stock exchange shares. The second unit is time, representing ten years from 2010 to 2019. The initial model can be specified based on the following general panel regression model:

**Model 4-1**

$$y_{it} = \alpha + \beta' X_{it} + \varepsilon_{it}$$

Where  $X_{it}$ ,  $i=1,\dots,N$   $t=1,\dots,T$ . One of the most prominent issues with Model 4-1 in ownership structure research is endogeneity. There are three sources of endogeneity (Gujarati

et al., 2012; Roberts and Whited, 2013; Wintoki et al., 2012). The first source stems from reverse causality. In this regard, the causality direction is not clear. In other words, it is not clear whether the dependent variable affects the independent variable or the other way around (Roberts and Whited, 2013). Another source of endogeneity is the simultaneity problem. Gujarati et al. (2012) states that the "simultaneity problem arises because some of the regressors are endogenous and are therefore likely to be correlated with the disturbance, or error term" (Gujarati et al., 2012, p. 753). The third source of endogeneity is unobservable heterogeneity. Wintoki et al. (2012) mention that unobserved heterogeneity exists when an unobservable variable or a factor affects the relationship between two or more variables in the regression model. The unobservable variable is included in the error term instead of being included as an exogenous variable.

In detail, many argue that the endogeneity problem exists in ownership structure research. For example, Demsetz (1983), Himmelberg et al. (1999), and Edmans and Holderness (2017), among others, support the idea that ownership concentration exists because of value-creation added by incumbent and new riders. Thus, better firm performance leads to more block holding. Moreover, (Kole, 1996) provides evidence of a reversed causality between ownership variables and performance. Moreover, Chaney et al. (2004) and Ho and Kang (2013) assert that the auditing engagement is not randomly conducted based on the firm's auditor choice but depends on the firm's attributes. Finally, Antoniou et al. (2006) comment that corporate debt maturity studies largely have neglected the endogeneity problem or have corrected it using fixed-effects or control variables. Therefore, this study argues that the endogeneity problem is a major issue that can affect the reliability of the estimates.

To explain the above with the objectives of this study, it is worth mentioning the strategies that have been used in previous empirical ownership structure studies. In general, all large shareholders studies consider either an act of intervention using the voice or exit method or a measure of block-holding such as the presence or number. Then, previous studies relate either one of the two to a firm-level attribute or outcome. Since the relationship is endogenous, empirical studies use two reversed correlation techniques. Some studies regress large shareholders related variables on firm-level attributes or outcomes ( for example, (Attig et al., 2009). Other studies use the opposite direction (for example, (McCahery et al., 2016).

As with any empirical correlation, there may be a moderating effect between the two (for example, (Feito-Ruiz et al., 2021). Therefore, the direction of the relationship is not clear, and

causality is hard to assert. In this regard, Edmans and Holderness (2017) comment that "the relationship between blockholders and firms is thus two-way: ownership concentration can be on either side of a regression equation, and in some papers is in fact on different sides of different regressions. This two-way relationship highlights the biggest challenge in testing any theory involving blockholders: Identifying causal effects is difficult and can never be conclusive" (Edmans and Holderness, 2017, p. 585).

In addition, previous empirical ownership structure studies have dealt with unobservable heterogeneity by using firm characteristics as control variables based on theoretical justification. For example, previous studies agree on the importance of the addition of both firm size and firm age as these two measures are theoretically linked to ownership concentration. However, some unobserved measures are hard to quantify (for example, shareholder competence or beliefs). Therefore, if shareholders' competence is related to both the large shareholders' measure and the dependent variable, then it is likely that the estimation will yield a biased coefficient. In some cases, when the unobservable heterogeneity results from a missing factor, not a variable, the situation becomes more complicated as it is hard to specify the direction of the correlation between the independent and dependent variables. Regardless of the source of endogeneity, researchers have suggested many techniques. One technique is the use of instrumental variables. Instrumental variables include either using the lagged dependent variables as instruments and running a single equation model (Garay and González, 2008) or an instrument outside of the model.

From the previous discussion about endogeneity sources, the use of instrumental variables requires that any instrument be valid. Validity means asserting that the instrument is relevant to the independent variable and uncorrelated with the error term. In this regard, Roberts and Whited (2013) outline that the main issue stems from the latter. In other words, the relevance of the instrument can be tested statistically. Nonetheless, the exclusion restriction must be built based on economic logic. Few studies were able to use an independent instrument other than the lag of the dependent variable (Bennedsen et al., 2007). However, As outlined by Wintoki et al. (2012), the most appropriate estimation method is the two-step system GMM. The following section explains dynamic models and implementation of the two-step system GMM.

#### **4.6 GMM implementation and assumptions**

The previous section supports that endogeneity is a major issue that calls for the adaption of a robust estimation method. Recent studies such as Cai et al. (2016) and Basu et al. (2016)

have adopted dynamic models and applied the two-step GMM. This section provides a practical application of the two-step GMM. The application of the GMM is concerned with two main processes, namely the identification of a relevant dynamic model and the identification of numbers of lags. The first process of the two-step GMM includes identifying a relevant dynamic model. Consistent with the economic logic of the theory of the firm, the agency theory, and theoretical models of block-holders, the following dynamic model is used:

**Model 4-2**

$$X_{it} = f(y_{it-1}, y_{it-2}, \dots, y_{it-p}, Z_{it}, \sigma_i)$$

where X, Z, and y represent ownership structure variables, firm characteristics, and firm performance, respectively, and  $\sigma_i$  represents an unobserved firm effect. Also, P represents the number of lags. In this early stage, the model is constructed based on the following economic logic. First, based on agency theory, block holding is a process that creates a choice variable through a network of contracts that involve bargaining power. Second, each block-holder chooses to invest based on the firm's current and past performance. Third, block holding is an investment strategy that tends to be stable over time; nonetheless, the intervention of the block-holder is dynamic and can be affected by past and current firm performance. Now, Model 4-2 can be transformed -conditional on firm heterogeneity- to the following model:

**Model 4-3**

$$y_{it} = \alpha + \sum_s k_s y_{it-s} + \beta X_{it} + \gamma Z_{it} + \sigma_i + \epsilon_{it} \quad s = 1, \dots, P,$$

where  $\epsilon_{it}$  is a random error term and  $\beta$  is the effect of ownership structure on firm performance. Now, once the dynamic relationship is set out, the GMM process involves rewriting Model 4-3 in the first difference form:

**Model 4-4**

$$\Delta y_{it} = \alpha + K_P \sum_P \Delta y_{it-P} + \beta \Delta X_{it} + \gamma \Delta Z_{it} + \Delta \epsilon_{it} \quad P > 0$$

The first difference form eliminates any unobserved heterogeneity issues with the dynamic fixed effect model (i.e., time-invariant unobserved heterogeneity). Also, the first difference allows using two types of instruments. First, previous dependent variables can be used as an endogenous instrument based on the number of related lags. Also, current

independent and control variables can be used as either endogenous, exogenous, or predetermined instruments based on economic logic.

Although the first difference eliminates shortcomings from the dynamic fixed-effect model, the first difference bears three issues. First, the first difference form fails to capture the impact of the variation in the explanatory variables if the original model is logically constructed in levels (Beck et al., 2000). Second, using variables that are conceptually in levels as instruments in a first difference equation can weaken the power of the instruments (Arellano and Bover, 1995). Third, Griliches and Hausman (1986) outline that the first difference form can augment the measurement error of the dependent variable.

Based on these three issues. Arellano and Bover (1995) and Blundell and Bond (1998) suggest using a system of equations that can serve the conceptual construction of the model in levels. In this procedure, the first difference form is used as an instrument across all variables. Therefore, the two-step system GMM involves estimating the following model:

**Model 4-5**

$$\begin{bmatrix} Y_{it} \\ \Delta Y_{it} \end{bmatrix} = \alpha + k \begin{bmatrix} Y_{it-p} \\ \Delta Y_{it-p} \end{bmatrix} + \beta \begin{bmatrix} X_{it} \\ \Delta X_{it} \end{bmatrix} + \gamma \begin{bmatrix} Z_{it} \\ \Delta Z_{it} \end{bmatrix} + \epsilon_{it}$$

Once the model is estimated, there are two main tests for validating the quality of the instruments, namely the second-order serial correlation test (AR1 and AR2) and the Hansen test of over-identification. The first test provides information on whether the application of instruments based on the number of lags is valid. Thus, if the number of lags is enough, "then any historical value of firm performance beyond those lags is a potentially valid instrument since it will be exogenous to current performance shocks" (Wintoki et al., 2012, p. 588). Therefore, AR1 should reflect a correlation between the residuals in the first differences. However, AR2 should not reflect a correlation between the residuals in second differences. Regarding the Hansen test of over-identification, Roodman (2009) outlines that any Hansen test p-value below .1 or higher than .25 can reduce the estimation quality.

The second process includes the selection of lags to capture the dynamic nature of firm performance. In this regard, previous empirical research considered different numbers of lags. For example, both Wintoki et al. (2012) and Akbar et al. (2016) use four lags of past firm performance, while Cai et al. (2016) use five lags of past firm performance. This study agrees with Akbar et al. (2016) on adapting the number of lags based on the statistical significance

between current values and past values. Therefore, to identify the number of lags for each dependent variable, the study employs the following model:

**Model 4-6**

$$y_{it} = \alpha_1 + \sum_1^4 y_{it-p} + \gamma Z_{it} + \epsilon_{it} \quad p = 1, \dots, 4$$

The notations are the same as in Model 4-3. Now, Model 4-6 will be used as a preliminary test to check the level of statistical significance between current and past dependent variables. For example, If the four lags do not provide a statistical significance, three lags will be adopted, and so on. This process will be used and reported in the following three empirical chapters. Finally, full model specifications for each dependent variable are elaborated separately in each related empirical chapter.

**4.7 Descriptive statistics for independent variables**

Table 4-2 shows the number of observations based on the LCS and first MLS type. In this regard, LCSs, as pressure-sensitive institutional investors, dominate the sample with 1609 observations. LCSs as a family comes in second place with 1557 observations. Regarding the first MLS, family holding represents 34.62%, followed by pressure-sensitive institutional investors with 22.41%. Table 4-3 summarises the independent variables used in the following three empirical chapters. Table 4-3 reports the ultimate voting rights -as parentage of total holding- for the largest five shareholders (LCS, V2, V3, V4, and V5). Table 4-3 shows that the blocks range from 100% -wholly-owned firms<sup>25</sup>- for the LCS to 5% for the largest fifth block.

**Table 4-2 Distribution of types of the LCS and first MLS.**

Type	LCS	%	1stMLS	%
Family	1557	28.50	1752	34.62
Corporation	914	16.73	1061	20.97
pressure-sensitive investors	1609	29.45	1134	22.41
pressure-resistant investors	1019	18.65	779	15.40
Other types	365	6.68	334	6.60
Total	5464	100.00	5060	100.00

<sup>25</sup> These few cases are related to aggregating blocks for individuals from the same family. In other words, this is the reason why the maximum percent of the LCS and V2 equals to 100% and 50%, respectively in some cases.

*MLS5* shows that -in the AIM firms- 88.3% of the firms have at least two MLS behind the LCS. The presence of MLS is relatively high compared to other studies in main markets in Europe and East Asia. For example, 34.1% of French firms have at least two MLS behind the LCS (Ben-Nasr et al., 2015). El Ghoul et al. (2018) report that MLS dominate 37.41% of Western European Firms. Moreover, Attig et al. (2009) report that MLS are present in 33.2% of East Asia.

The high presence of MLS in the sample used in this study is attributed to two factors. First, previous studies use the 10% threshold to identify MLS, which diminishes the documentation of more large blocks. However, since this study uses the 1% threshold to trace large shareholders, more blocks are considered, increasing the presence of MLS. Second, main markets have lower shareholder holdings than alternative markets due to market regulatory requirements. For example, in the UK, at least 25% of total shares must be held by the public<sup>26</sup>. Such requirements contribute to the lower presence of MLS in main markets. Regarding the number of MLS other than the LCS, the sample reveals that there are 3.253 blocks. About the dispersion among shareholders, *Hdis5* shows an average of 2.994 and a standard deviation of 6.403.

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26 A guide to listing on the London Stock Exchange, 2010 retrieved from:  
<https://docs.londonstockexchange.com/sites/default/files/documents/guide-main-market-pdf.pdf>

**Table 4-3 Summary statistics for the independent variables**

	N	Mean	max	min	Std. Dev.	p25	Median	p75
LCS	5051	22.3	100.000	5	16.708	11.84	17.47	26.39
V2	4557	13.09	50.000	5	6.21	8.87	11.6	15.97
V3	4032	10.023	33.330	5	3.968	7.1	9.27	11.89
V4	3474	8.434	22.670	5	2.772	6.3	7.84	9.83
V5	2806	7.526	18.610	5	2.221	5.8	6.94	8.7
MLS5	4550	.883	1.000	0	.322	1	1	1
Number5	4550	3.253	4.000	1	1.067	3	4	4
Hdis5	4550	2.944	40.508	.006	6.403	.263	.734	2.318
Maj30	5051	.169	1.000	0	.375	0	0	0
Same12	5045	.348	1.000	0	.476	0	0	1
Same123	5045	.147	1.000	0	.354	0	0	0
Fam12	5045	.118	1.000	0	.323	0	0	0
Ins12	5045	.058	1.000	0	.234	0	0	0
Bank12	5045	.136	1.000	0	.343	0	0	0

This table shows descriptive statistics for the variables used in the empirical analysis of all three chapters. *LCS*, *V2*, *V3*, *V4*, and *V5* are the ultimate voting rights for the first-fifth largest shareholders. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of MLS behind the LCS up to the fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences between the first and the second-largest voting rights, the second and the third largest voting rights, the third and fourth voting rights, and the fourth and fifth voting rights at the 5% % threshold. *Maj30* is a dummy variable that equals one if the voting rights held by the LCS exceed 30%. *Same12* is a dummy variable that equals one if the LCS and first MLS are from the same type and zero otherwise. *Same123* is a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. *FAM12* is a dummy variable that equals one if the LCS and 1st MLS are a family and zero otherwise. *INS12* is a dummy variable that equals one if the LCS and 1st MLS are pressure-resistant institutional investors and zero otherwise. *Bank12* is a dummy variable that equals one if the LCS and 1st MLS are pressure-sensitive institutional investors and zero otherwise. *Hdis5* is winsorised at the 1st and 99th percentiles.

## 4.8 Summary

The chapter presented an overall view of the empirical analysis used in the following three chapters. The chapter showed that the Fame databank is the primary source of ultimate voting rights data. The chapter defined MLS as any blocks with 5% or more of the total holding. In addition, the chapter reveals that the study considers a sample of 670 firms from 2010 to 2019. Furthermore, it discussed the variables used for MLS presence, number, and relative power, among the dependent variables. Finally, it provided reasons for using panel data and a brief outline of estimation methods, and justifications for its use. The next part of this thesis involves three empirical investigations of MLS presence, power, and relative power on firm performance, audit fees, and corporate debt maturity.

## **Chapter 5 : The Effect of Multiple Large Shareholders on Firm Performance**

### **5.1 Introduction**

This chapter aims to investigate publicly-traded SMEs with an ownership structure characterised by the presence of MLS<sup>27</sup>. The chapter seeks to understand the effect of MLS on firm performance by considering two elements. First, the chapter implements a disaggregated view examining how MLS can interact with their firms. Second, the chapter uses the type of MLS to augment the analysis. This chapter is motivated by the debate on the association between ownership structure and agency conflicts. In this vein, agency conflicts come in two forms. The first form is the agent-principal conflict, in which the management has control over the firm (Grossman and Hart, 1986; Jensen and Meckling, 1976). The second form is characterised by the presence of at least one LCS who has the incentives and power to impose control over the management (Demsetz, 1983; Shleifer and Vishny, 1986). Upon the presence of the LCS, the control is no longer held entirely by the management which gives the LCS the room to expropriate minority shareholders, creating the commonly known principal-principal conflict. Still, the severity of the principal-principal conflict increases with the presence of MLS, who have the incentives and power to impose control over the LCS and the management.

With the presence of LCSs and MLS, type two agency conflict becomes more pronounced. In this regard, MLS intervene in the conflicts between the LCS and minority shareholders. In addition, MLS can create a conflict among them due to their strategic investment differences. Type two agency conflict can be considered a new way to look at agency relationships, and it can be viewed as a collective action problem among many parties. Therefore, the study argues that MLS can affect firm performance by impacting agency costs. The relationship between the presence, number, and relative power of MLS and firm performance is treated as an empirical issue.

Theoretically, the presence of MLS results in two contrasting views. On the one hand, MLS are assumed to play a monitoring role over the LCS, enhancing firm performance (Bennedsen and Wolfenzon, 2000; Bloch and Hege, 2003). On the other hand, MLS can collude with the LCS to expropriate minority shareholders, resulting in lower firm performance (Kahn and

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<sup>27</sup> As outlined in the data and methodology MLS refer to any shareholder with 5% or more of the ultimate voting rights.

Winton, 1998; Zwiebel, 1995). This chapter investigates these two opposing roles to determine which one dominates the situation in publicly traded SMEs. To examine these roles, the study relates firm performance to the presence, number, and relative power of MLS. The study makes its first contribution by constructing an extensive dataset on ultimate voting rights. Each shareholder's cash flow is traced along the shareholding chain to calculate voting rights.

Following the same structure in both Maury and Pajuste (2005) and Boubaker and Sami (2011), this study is different in many ways. First, although the presence of the MLS is documented in many markets, it is exclusively documented for main markets. These main markets are solely for large publicly traded firms. However, MLS studies entirely neglect markets for small and medium-sized entities (SMEs). This study aims initially to bridge the gap in the literature to provide evidence on the role of MLS from the AIM, a market devoted to SMEs. Second, this study takes a pluralistic approach to examine ownership structures by understanding MLS's role in affecting performance by adding the type-dimension to the main analysis. In summary, this chapter aims to provide evidence on the relationship between MLS and firm performance and precisely seeks to answer the following:

Q1: What is the effect of the presence, number, and relative size of MLS on firm performance in AIM?

Q2: What is the effect of MLS type on the relationship between the presence of MLS and firm performance in AIM?

The chapter is structured as follows: 1) hypotheses development, 2) descriptive statistics, 3) the empirical results, and 5) further analysis and robustness checks.

## **5.2 Hypothesis development**

### **5.2.1. The presence, number, relative size and type of MLS and firm performance**

This section discusses the role played by MLS and their effect on firm performance. The argument of the relationship between MLS and firm performance is built on two premises. MLS are part of both types of agency conflicts. Therefore, MLS interaction will affect agency costs; hence, the interaction will affect firm performance. Second, MLS can interact directly through the voice method or indirectly through trading using the exit method. Such an interaction can affect many firms' decisions, such as risk-taking and eventually affect firm performance. This section elaborates on these two premises and links them to theoretical and empirical studies to propose a testable statement.

First, MLS are part of both types of agency conflicts because they have the incentives and power to impose control. Since control comes with private benefits, MLS - as a value maximiser - will seek to secure private benefits of control. Dyck and Zingales (2004) comment that the potential extraction of private benefits by the LCS “reduces what minority shareholders are willing to pay for shares, lowering the value of all companies where such behaviour represents a real possibility. And by raising the cost of finance, it limits the ability of such firms to fund attractive investment projects.” (Dyck and Zingales, 2004, p. 52).

In this regard, two theoretical views are documented regarding the private benefits of control. MLS can impose power to either improve or distress performance. On the one hand, MLS may play an effective monitoring role in reducing the extraction of private benefits of control by the LCS or management. MLS may engage in control contestability situations, decreasing the ability to exploit private benefits of control by the LCS (Bloch and Hege, 2003). In the same line, Bennedsen and Wolfenzon (2000) outline that the presence of MLS affects the ability to form a winning coalition. If a firm has MLS, the winning coalition needs to be large enough to attain control. Therefore, the winning coalition will incorporate the cost of expropriation, resulting in low incentives to extract control benefits. On the other hand, some studies acknowledge that MLS are detrimental to their firm performance. This view supports the idea that MLS can form a coalition to attain divisible benefits of control, thus, harming minority large shareholders (Gomes and Novaes, 2006; Pagano and Röell, 1998; Zwiebel, 1995).

Empirical studies have examined these two contrasting roles and provided mixed evidence. First, Claessens et al. (2002) provide evidence on the efficient-monitoring effect and report a positive and significant impact of cash flow ownership of MLS on firm value. Also, the same results are reported in Finland as in Maury and Pajuste (2005), in France as in Boubaker et al. (2016), and in Germany as in Andres (2008). On the other hand, other studies have provided evidence of the entrenchment effect. Thomsen et al. (2006) find a negative impact of MLS on firm performance in Continental Europe. Also, Cai et al. (2016) report a negative impact of MLS on firm performance in China.

The above discussion shows, theoretically and empirically, that MLS can play two competing roles. One side supports the efficient-monitoring hypothesis, stating that MLS presence can positively affect performance. The other side supports the entrenchment hypothesis, arguing that MLS can harm firm performance. However, the prevailing effect

depends to some extent on the nature of the sample. In this regard, Edmans and Holderness (2017) support the view that MLS research should pay attention to the institutional details in which ownership variations, governance system, and legal framework may impact the structure of the research. Therefore, the ability in which MLS can improve or distress firm value depends on the features of AIM.

In this regard, Mortazian et al. (2019) define three important elements that lead to choosing the entrenchment hypothesis for the AIM firms. First, in AIM, block holding is not limited to a certain threshold compared to the main market, limiting block holding to 30% of total blocks. This holding limit results in a lower MLS presence in the main market than AIM. Second, the main market imposes restricted independence requirements regarding the intervention in the firms' operations. Such requirements restrain the full interaction of MLS with their firms. Third, the AIM governance system is self-dealing, which imposes lower investor protection than the main market. Therefore, based on these features, the study supports the entrenchment hypothesis and assumes that:

***H<sub>1</sub>: The presence of MLS is negatively associated with firm performance in AIM.***

Now the association between the presence of MLS and firm performance is established in ***H<sub>1</sub>***. However, many studies advocated using the number of MLS to augment the analysis of the relationship. In this regard, two contrasting hypotheses are linked to the number of MLS. The addition of the number of MLS can enhance the quality of the results and allow to separate the coalition formation effect (Bennedsen and Wolfenzon, 2000) and the bargaining effect (Gomes and Novaes, 2006).

In this regard, Bennedsen and Wolfenzon (2000) advocate the coalition formation effect, which confirms that the number of MLS is associated with a negative effect on firm performance. In other words, having more MLS will influence the winning coalition, which gives the winning coalition a small equity stake. Therefore, the winning coalition has fewer incentives to impose monitoring, leading to lower firm value.

On the other hand, Gomes and Novaes (2006) support the bargaining effects and state that a larger number of MLS positively impacts firm performance. In this regard, a larger number of MLS leads to a discrepancy among MLS, limiting their ability to implement decisions that lead to expropriating minority shareholders. Eventually, a disagreement among MLS will lead to higher firm performance. As with the previous hypothesis, it is unclear which hypothesis -a priori- should dominate the relation between firm performance and the number of MLS.

Therefore, using the features of the AIM market and the argument provided in *H<sub>1</sub>*, the study supports the coalition formation effect and proposes that:

***H<sub>2</sub>: The number of MLS is negatively associated with firm performance in AIM.***

Regarding the relative size of MLS, Bloch and Hege (2003) and Maury and Pajuste (2005) agree that when blocks are evenly distributed among the largest shareholders, firm performance is high. In other words, evenly distributed shares give MLS the power and incentives to compete with the LCS, thus enhancing monitoring. Empirical studies on the relative size of MLS are mixed. Attig et al. (2008) reveal that the second-largest shareholder plays a good monitoring role by challenging the largest shareholder, which results in higher firm value. However, Cai et al. (2016) show that MLS are more willing to expropriate minority shareholders when their blocks are similar in size to that of the LCS. Therefore, consistent with the argument provided in *H<sub>1</sub>* and *H<sub>2</sub>* of the entrenchment effect and the coalition formation effect, the study assumes that forming a controlling coalition to share private benefits creates incentives for MLS and the LCS to divert firm resources. Thus, the study assumes that

***H<sub>3</sub>: More comparable voting rights between large shareholders decrease firm performance in AIM.***

### **5.2.2. The type of multiple large shareholders and firm performance**

The previous section built the argument related to the relationship between the presence, number, and relative size of MLS and firm performance. However, many studies support the addition of the type of the LCS and MLS to enhance the interpretation of the results (Anderson et al., 2012; Attig et al., 2008; Burkart et al., 2003; Laeven and Levine, 2007; Maury and Pajuste, 2005). This section considers the effect of type-dimension on the relationship between MLS and firm performance. The argument here is built on whether MLS homogeneity can affect the intensity of the relationship between the presence of MLS and firm performance. In this regard, Maury and Pajuste (2005) find that firms with MLS have differences among them, suggesting the need to examine the type of each MLS. The authors imply that different types of ownership are less likely to form controlling coalitions. Thus, the entrenchment effect and the coalition formation effect are most likely to occur in firms with homogeneous large shareholders.

Moreover, Andres (2008) states that “It thus appears that not only are the block holder position and the monitoring incentives it entails relevant, but the identity of the block holder is as well” (Andres, 2008, p. 432). The author finds that firms controlled by a family

outperformed both widely held firms and firms controlled by other types of shareholders. Family-controlled firms are the only firms that show a positive and significant relationship with performance. On the contrary, Maury and Pajuste (2005) propose that firm performance is lower when a family controls a firm if the second-largest shareholder is another family. However, performance is higher when the second-largest shareholder is from a different class (for example, a financial institution). Attig et al. (2008) document that type-dimension influences the results when agency costs are high. Such severe agency conflict is more likely to occur when large shareholders are heterogeneous. Based on this argument, the study suggests that:

***H4: MLS homogeneity increases the intensity of the relationship between MLS presence and firm performance listed SMEs.***

### 5.3 Model specification

This section builds more on the data and methodology chapter. As established in section 4.6, a correct application of the GMM requires testing the appropriate number of lags from historical dependent variables. In this regard, the study first runs the following model using pooled OLS:

#### Model 5-1

$$y_{it} = \alpha_1 + \sum_{p=1}^4 y_{it-p} + \gamma Z_{it} + \epsilon_{it} \quad p = 1, \dots, 4$$

Where  $y_{it}$  is one of the performance variables ( *ROA* or *TQs*).  $Z_{it}$  is one of the control variables ( *Size*, *Leve*, *Tang*, *Grow*, and *Age*). Once the OLS estimation provides a statistical significance between current and lag dependent variables, they can be used as valid instruments. However, once historical dependent variables provide no statistical significance, they cannot be used as valid instruments.

Regarding the analysis, the relation between MLS and firm performance should consider both the presence and MLS type. Based on this view, the study considers Model 5-2 and Model 5-3 for the main empirical analysis. Regarding the presence, number, and relative power of MLS, this study adopts the following dynamic models to test the first three hypotheses:

#### Model 5-2

$$ROA_{i,t} = \alpha_t + \alpha_i + ROA_{i,t-1} + ROA_{i,t-2} + \beta_1 MLSVAR_{i,t} + \beta_2 Size_{i,t} + \beta_3 Leve_{i,t} \\ + \beta_4 Tang_{i,t} + \beta_5 Grow_{i,t} + \beta_6 Age_{i,t} + \epsilon_{i,t}$$

*ROA* is the main dependent variable calculated as the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year (Boubaker et al., 2016). *MLSVAR* is one of the three proxies for MLS, namely *MLS5*, *Number5*, and *Hdis5*. As established in **H<sub>1</sub>**, it is assumed that MLS are likely to form a coalition to expropriate minority shareholders. Thus, *MLS5* is expected to have a negative relationship with *ROA*. *MLSN5* equals the number of MLS behind the largest shareholder up to the fourth shareholder at the 5% threshold<sup>28</sup>. As established in **H<sub>2</sub>**, this study assumes a negative relationship between *Number5* and *ROA*.

Moreover, the relative power of shareholders elaborates more on control contestability versus coalition formation. Therefore, the Herfindahl dispersion measure is used because blocks are relatively comparable among the LCS and MLS. In this regard, *Hdis5* is expected to have a positive relationship with *ROA*. In other words, lower dispersion among the LCS and MLS indicates that shares are equally distributed, making the wedge between the LCS and MLS low.

Regarding the type-dimension, this study adopts the following dynamic models to test the fourth hypothesis:

**Model 5-3**

$$ROA_{i,t} = \alpha_t + \alpha_i + ROA_{i,t-1} + ROA_{i,t-2} + \beta_1 MLS5_{i,t} * Type_{i,t} + \beta_2 Size_{i,t} + \beta_3 Leve_{i,t} + \beta_4 Tang_{i,t} + \beta_5 Grow_{i,t} + \beta_6 Age_{i,t} + \varepsilon_{i,t}$$

Model 5-3 adds the type of MLS to the main analysis using an interaction term between *MLS5* and *Type*. In this regard, *Type* is a measure of MLS homogeneity, and it is one of two variables. The first is *Same12*, a dummy variable that equals one if the LCS and first MLS are from the same type and zero otherwise. The second is *Same123*, a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. As established in **H<sub>4</sub>**, this study assumes a higher intensity of the association between the *MLS5* and *ROA* when homogeneity increases.

**5.4 Descriptive statistics and pairwise correlation matrix**

This section presents the descriptive statistics for dependent and control variables used in the analysis of this chapter. Table 5-1 uses the mean, the standard deviation, the maximum,

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28 This study considers four MLS behind the LCS to make sure that no shareholder at the 5% threshold is excluded from the analysis.

the minimum, and the number of observations to describe the data over the period 2010-2019. As Table 5-1 shows, *ROA* has an average (standard deviation) of -0.185 (0.602). The negative ratio of *ROA* is consistent with many studies in AIM (Al-Najjar, 2018; Feito-Ruiz et al., 2021). Finally, about control variables, asset tangibility is £.518 million with a maximum of £.987 million. Leverage has an average of .172% and a standard deviation of .219. Sale growth has a minimum of a negative number which suggests that sales have dropped for some firms between 2010 and 2019. and Table 5-3 report the VIF test and pairwise correlation matrix.

Table 5-2 reports that VIF values and mean VIF are below 10, indicating no multicollinearity problems in each separate model. Moreover, as Gujarati et al. (2012) suggests, multicollinearity is confirmed if the correlation coefficient is higher than 80% between two variables. As Table 5-3 shows, multicollinearity is only present among MLSVAR, which are used as separate proxies for MLS.

**Table 5-1 Summary statistics: Firm performance and related control variables.**

	N	Mean	max	min	Std. Dev.	p25	Median	p75
ROA	5655	-.185	0.345	-4.299	.602	-.211	-.009	.073
TQs	4920	2.093	10.683	.363	2.007	.929	1.388	2.378
Size	5655	9.902	13.562	5.351	1.67	8.78	9.955	11.125
Leve	4268	.172	1.378	.001	.219	.035	.101	.231
Tang	5545	.518	0.987	.002	.279	.3	.528	.754
Grow	4307	22.094	234.074	-62.968	60.047	-4.996	8.578	28.599
Age	5624	14.219	119.000	1	19.977	6	10	14

This table shows descriptive statistics for the variables used in the empirical analysis of this chapter. *ROA* is the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *TQs* is the market value of total assets divided by the replacement cost of total assets. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *Tang* is the tangible assets divided by total assets. *Grow* is the percentage of sales growth. *Age* is the number of years since first being incorporated. *Grow is* is winsorised at the 3rd and 97th percentiles. *ROA*, *TQs*, *Size*, *Leve*, and *Tang*, are winsorised at the 1st and 99th percentiles.

**Table 5-2 Variance inflation factor (empirical chapter one).**

	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
MLS5	1.019	.981				
Number5			1.03	.97		
Hdis5					1.006	.994
Tang	1.127	.887	1.126	.888	1.127	.887
Size	1.101	.908	1.116	.896	1.087	.92
Leve	1.065	.939	1.062	.941	1.063	.941
Age	1.038	.963	1.041	.961	1.04	.961
Grow	1.016	.984	1.016	.984	1.016	.984
Mean VIF	1.061	.	1.065	.	1.057	.

This table shows VIF tests using three separate OLS regressions, using MLS5, Number5, or Hdis5. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *Tang* is the tangible assets divided by total assets. *Grow* is the percentage of sales growth. *Age* is the number of years since first being incorporated. *Grow is* is winsorised at the 3rd and 97th percentiles. *ROA*, *TQs*, *Size*, *Leve*, and *Tang*, are winsorised at the 1st and 99th percentiles.

**Table 5-3 Pairwise correlations MLS and firm performance.**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) ROA	1.000											
(2) TQs	-0.351 (0.000)	1.000										
(3) MLS5	0.044 (0.004)	-0.006 (0.688)	1.000									
(4) Number5	0.045 (0.003)	0.009 (0.569)	0.769 (0.000)	1.000								
(5) Hdis5	0.033 (0.030)	-0.012 (0.460)	-0.274 (0.000)	-0.352 (0.000)	1.000							
(6) Same12	-0.023 (0.107)	0.007 (0.639)	-0.021 (0.157)	-0.035 (0.018)	0.025 (0.098)	1.000						
(7) Same123	0.008 (0.560)	-0.015 (0.342)	0.128 (0.000)	0.072 (0.000)	-0.033 (0.028)	0.568 (0.000)	1.000					
(8) Size	0.466 (0.000)	-0.298 (0.000)	0.091 (0.000)	0.146 (0.000)	-0.023 (0.124)	-0.037 (0.010)	-0.034 (0.018)	1.000				
(9) Leve	-0.254 (0.000)	-0.007 (0.677)	-0.049 (0.004)	-0.049 (0.004)	0.104 (0.000)	0.025 (0.132)	0.018 (0.273)	-0.037 (0.015)	1.000			
(10) Tang	0.141 (0.000)	-0.323 (0.000)	-0.002 (0.887)	-0.007 (0.633)	-0.051 (0.001)	-0.005 (0.729)	0.005 (0.754)	0.222 (0.000)	0.132 (0.000)	1.000		
(11) Grow	-0.037 (0.014)	0.172 (0.000)	0.002 (0.930)	0.013 (0.439)	-0.014 (0.413)	-0.001 (0.964)	0.005 (0.748)	0.001 (0.966)	0.010 (0.531)	0.044 (0.004)	1.000	
(12) Age	0.022 (0.107)	-0.115 (0.000)	-0.025 (0.102)	-0.043 (0.005)	0.032 (0.036)	0.020 (0.163)	-0.027 (0.057)	0.075 (0.000)	0.107 (0.000)	0.063 (0.000)	-0.083 (0.000)	1.000

This table reports Pearson pairwise correlation coefficients for all the variables used in this chapter. *ROA* is the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *TQs* is the market value of total assets divided by the replacement cost of total assets. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of MLS behind the LCS up to the fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences between the first and the second-largest voting rights, the second and the third largest voting rights, the third and fourth voting rights, and the fourth and fifth voting rights at the 5% % threshold. *Same12* is a dummy variable that equals one if the LCS and first MLS are from the same type and zero otherwise. *Same123* is a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *Tang* is the tangible assets divided by total assets. *Grow* is the percentage of sales growth. *Age* is the number of years since first being incorporated. *Grow* is winsorised at the 3rd and 97th percentiles. *ROA*, *TQs*, *Hdis5*, *Size*, *Leve*, and *Tang*, are winsorised at the 1st and 99th percentiles. Significance levels between parentheses.

## 5.5 Empirical evidence and discussion

This section provides the results using the models provided in section 5.3. In this regard, the results are presented in three following subsections.

### 5.5.1. Testing the number of lags

Table 5-4 reports the results using pooled OLS regression. Table 5-4 (Columns 1 and 2) show the effect of the previous four historical *ROA* on the current *ROA*. In addition, Table 5-4 (Columns 3 and 4) show the effect of the previous four historical *TQs* on the current *TQs*. Across all specifications, one can note that up to four-year historical performance is statistically significant with current *ROA* and *TQs*. Therefore, using these historical values as an endogenous instrument in the GMM specifications from lag four is appropriate.

**Table 5-4 Lags on performance measures.**

	(1) ROA	(2) ROA	(3) TQs	(4) TQs
Performance(t-1)	.3075*** (.072)		.5628*** (.0507)	
Performance(t-2)	.208*** (.0669)		.1371*** (.0483)	
Performance(t-3)	.0256 (.0357)	.1626*** (.0451)	.0035 (.0407)	.3749*** (.0487)
Performance(t-4)	.061 (.0377)	.1219** (.0497)	.0134 (.0385)	.086* (.0468)
Size	.0391*** (.0086)	.0672*** (.0089)	-.0125 (.0208)	-.014 (.0258)
Leve	-.3575*** (.0789)	-.5311*** (.1039)	-.436*** (.134)	-.816*** (.1695)
Tang	.0739* (.0396)	.1208*** (.0419)	-.2715*** (.1045)	-.7285*** (.1417)
Grow	.0007*** (.0002)	.0004* (.0002)	.0017** (.0008)	.0025*** (.0009)
Age	.0008*** (.0003)	.0012*** (.0004)	-.0013 (.0009)	-.003** (.0012)
Constant	-.4538*** (.0895)	-.7802*** (.0985)	.8969*** (.2313)	1.7234*** (.2904)
Observations	2035	2046	1761	1773
R-squared	.5042	.3899	.6069	.3561
Year dummies	yes	yes	yes	yes
industry dummies	yes	yes	yes	yes

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table reports the pooled OLS regression to justify the number of lags used in GMM. *ROA* is the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *TQs* is the market value of total assets divided by the replacement cost of total assets. *Size* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *Tang* is the tangible assets divided by total assets. *Grow* is the percentage of sales growth. *Age* is the number of years since first being incorporated. *Grow* is winsorised at the 3rd and 97th percentiles. *ROA*, *TQs*, *Hdis5*, *Size*, *Leve*, and *Tang*, are winsorised at the 1st and 99th percentiles.

### 5.5.2. Main evidence and discussion

This section presents and discusses the results related to  $H_1$ ,  $H_2$ , and  $H_3$ . As established in the hypotheses section,  $MLS5$  and  $Number5$  are expected to affect firm value negatively. In the same line, the blocks dispersion measure ( $Hdis5$ ) is expected to correlate with firm value positively. In other words, lower  $Hdis5$  means that the shares are relatively equally distributed among the LCS and MLS. Table 5-5 shows the main results that explain the effect of MLS on firm performance. As Table 5-5 shows, Model 5-2 is valid using several tests. First, Table 5-5 shows the number of groups and instruments used. One can notice that the number of groups is larger than the number of instruments. Moreover, AR (2) suggests that there is no autocorrelation and confirms the validity of Model 1. Hansen provides evidence that the instruments are valid.

Column 1 (Table 5-5) shows that the coefficient of  $MLS5$  is negative and significant at the 1% level, suggesting that the presence of MLS translates into a 0.0926 reduction in  $ROA$ , on average ceteris paribus. Furthermore, Column 2 (Table 1-5) suggests that a higher number of MLS leads to lower firm performance. In other words, in the short run,  $Number5$  is associated with a 0.0179 reduction in  $ROA$ , on average ceteris paribus. Finally, Column 3 (Table 5-5) shows that  $Hdis5$  positively impacts  $ROA$ . The positive impact of  $Hdis5$  implies that the equal distribution of votes among MLS negatively correlates with firm performance. Column 3 (Table 5-5) shows that a percentage change in  $Hdis5$  is associated with a 0.17% increase in  $ROA$  at the 5% significance level in the short run on average ceteris paribus.

The results in Table 5-5 are consistent with the entrenchment effect of MLS and confirm  $H_1$ ,  $H_2$ , and  $H_3$ . The results are supported by the theoretical models of Gomes and Novaes (2006), Pagano and Röell (1998), and Zwiebel (1995). In these models, MLS can form a coalition with the LCS, exaggerating the type two agency conflict. Moreover, the results are supported by empirical studies such Cai et al. (2016), Stijn et al. (2002), and Thomsen et al. (2006). Precisely, Cai et al. (2016) show that MLS are more motivated to divert firm resources when their blocks are similar in size to that of the LCS. In summary, the evidence in Table 5-5 supports the argument that the presence, number, and relative size of MLS are likely to play a key role in increasing the extraction of PBC by forming a coalition with the LCS in SMEs.

**Table 5-5 The effect of MLS on firm performance (ROA).**

VARIABLES	(1) ROA	(2) ROA	(3) ROA
ROA <sub>t-1</sub>	0.3328*** (0.0118)	0.4913*** (0.0129)	0.4797*** (0.0119)
ROA <sub>t-2</sub>	0.0578*** (0.0065)	0.1541*** (0.0102)	0.1575*** (0.0095)
MLS5	-0.0926*** (0.0227)		
Number5		-0.0179*** (0.0048)	
Hdis5			0.0017** (0.0007)
Size	0.0627*** (0.0073)	0.0265*** (0.0048)	0.0285*** (0.0051)
Leve	-0.3737*** (0.0313)	-0.2046*** (0.0279)	-0.1846*** (0.0234)
Tang	0.0320 (0.0307)	0.0064 (0.0235)	0.0226 (0.0226)
Grow	-0.0004*** (0.0001)	-0.0002** (0.0001)	-0.0004*** (0.0001)
Age	0.0015* (0.0008)	0.0012** (0.0005)	0.0009* (0.0005)
Constant	-0.5807*** (0.0787)	-0.2190*** (0.0463)	-0.3076*** (0.0505)
Observations	2,340	2,340	2,340
Number of Groups	490	490	490
Number of Instruments	210	209	209
AR(1)	0.000158	0.000151	0.000129
AR(2)	0.389	0.226	0.218
Hansen	0.187	0.239	0.501

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 This table reports the main analysis in this chapter. *ROA* is the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of MLS behind the LCS up to the fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences between the first and the second-largest voting rights, the second and the third largest voting rights, the third and fourth voting rights, and the fourth and fifth voting rights at the 5% threshold. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *Tang* is the tangible assets divided by total assets. *Grow* is the percentage of sales growth. *Age* is the number of years since first being incorporated. *Grow is* is winsorised at the 3rd and 97th percentiles. *ROA*, *Hdis5*, *Size*, *Leve*, and *Tang*, are winsorised at the 1st and 99th percentiles.

### 5.5.3. The effect of MLS homogeneity

Table 5-6 refers to the analysis of MLS homogeneity. The results in Table 5-6 show the effect of the homogeneity of the top two and three shareholders on the results reported in Table 5-5. Table 5-6 (Column 1) shows the effect of MLS presence when the two largest shareholders are from the same type. One can notice that a percentage change in the interaction term is associated with a 0.2513 decrease in *ROA* in the short run, at the 1% significance level, on average *ceteris paribus*. Moreover, Table 5-6 (Column 2) shows that the coefficient of the interaction term is negative and significant at the 5% level, suggesting that the addition of the type of the largest three shareholders translates into a 0.2943 reduction in *ROA*, on average *ceteris paribus*. Compared with the results in Table 5-5 (Column 1), one can realise that homogeneity increases the intensity of the relationship between *ROA* and the presence of MLS, which confirms *H4*.

The results are consistent with the evidence provided by Cronqvist and Fahlenbrach (2009), who find that many firms' investment and financial decisions are related to the particular presence of large shareholders who are of the same type. Moreover, Kandel et al. (2011) provide evidence that the exit method is effectively exercised when the two largest shareholders are of the same type. Overall, the results suggest that the entrenchment role is effectively applied when the top two and three shareholders are of the same type.

**Table 5-6 The effect of MLS homogeneity on firm performance (ROA).**

VARIABLES	(1) ROA	(2) ROA
ROA <sub>t-1</sub>	0.3494*** (0.0129)	0.3480*** (0.0134)
ROA <sub>t-2</sub>	0.0518*** (0.0069)	0.0497*** (0.0066)
MLS5	-0.0107 (0.0266)	-0.0814*** (0.0246)
MLS5*Same12	-0.2513*** (0.0492)	
MLS5*Same12		-0.2943** (0.1153)
Size	0.0700*** (0.0074)	0.0649*** (0.0077)
Leve	-0.3192*** (0.0330)	-0.3706*** (0.0344)
Tang	-0.0114 (0.0320)	0.0249 (0.0320)
Grow	-0.0004*** (0.0001)	-0.0005*** (0.0001)
Age	0.0011 (0.0008)	0.0012 (0.0008)
Constant	-0.7224*** (0.0812)	-0.5905*** (0.0818)
Observations	2,328	2,328
Number of Groups	490	490
Number of Instruments	210	210
AR(1)	0.000145	0.000127
AR(2)	0.515	0.420
Hansen	0.173	0.252

Standard errors in parentheses\*\*\* p<0.01, \*\* p<0.05, \* p<0.1 This table reports the results using the type-dimension. *ROA* is the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Same12* is a dummy variable that equals one if the LCS and first MLS are from the same type and zero otherwise. *Same123* is a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. *Size* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *Tang* is the tangible assets divided by total assets. *Grow* is the percentage of sales growth. *Age* is the number of years since first being incorporated. *Grow* is winsorised at the 3rd and 97th percentiles. *ROA*, *Size*, *Leve*, and *Tang* are winsorised at the 1st and 99th percentiles.

## 5.6 Robustness checks and additional analysis

So far, the results in Table 5-5 and Table 5-6 show that MLS use their power to expropriate minority shareholders. To confirm the robustness of the results, this section re-examines the results in Table 5-5 using an alternative firm performance measure (TQs). Also, to expand the results provided in Table 5-6 about MLS homogeneity, this section provides additional tests using the two most prevailing types in the sample studied, namely family and institutional investors. Finally, this section provides evidence using two estimation methods: Propensity Score Matching (PSM) and Two-Stage least squares (2SLS) regression analysis.

### 5.6.1. Additional analysis with specific MLS type

Table 5-6 concludes that the presence of MLS negatively affects firm performance after adding the type-dimension. This section revisits Model 5-3 and adds more evidence regarding the largest three types presented in the sample. Compared with the results in Table 5-6 (Columns 1 and 2), Table 5-7 (Columns 1) shows that the interaction term between MLS5 and Maj30 exhibits a negative statistical significant impact at the 1% significance level. The results of such interaction shed more evidence on the coalition formation effect. The interaction term between MLS5 and Maj30 increases the intensity of the relationship between MLS and firm performance compared to the results reported in the main analysis.

Moreover, in Table 5-7 (Column 2), the interaction term coefficient is negative and significant at the 1% level, suggesting that the presence of MLS families translates into a 0.2260 reduction in *ROA*, on average ceteris paribus. The results confirmed that AIM's family holding is considered detrimental to firm performance. The mere presence of MLS translates into a 0.0926 reduction in *ROA*, compared to a 0.2260 reduction when the two largest shareholders are families. The interpretation of the results can take two directions. First, in line with Faccio and Lang (2002), family owners in AIM are entrenched owners who prefer to exchange profit for PBC.

On the other hand, in line with Demsetz and Lehn (1985), family owners seek to achieve "amenity potential" in which they aim to secure non-monetary PBC. For example, since most AIM firms are newly established entrepreneurial firms, family owners may use their power to secure executive positions for family members. Therefore, AIM firms may suffer from the adverse selection problem, which eventually increases agency costs and lowers performance.

Also, in Table 5-7 (Column 4), the interaction term coefficients are negative and significant at the 1% level, suggesting that MLS's presence -as pressure-sensitive institutional investors-

translates into a 0.37787 reduction in *ROA*, on average ceteris paribus. The results indicate that in AIM, pressure-sensitive institutional investors have a stronger intervention with their firms compared to family-holding in Table 5-7 (Column 2).

**Table 5-7 Additional analysis with specific MLS type on firm performance (ROA).**

VARIABLES	(1) ROA	(2) ROA	(3) ROA	(4) ROA
ROA <sub>t-1</sub>	0.3509*** (0.0138)	0.3370*** (0.0127)	0.3336*** (0.0119)	0.3506*** (0.0135)
ROA <sub>t-2</sub>	0.0539*** (0.0073)	0.0589*** (0.0064)	0.0554*** (0.0066)	0.0602*** (0.0070)
Maj30* MLS5	-0.3923*** (0.0559)			
MLS5*Fam12		-0.2260*** (0.0723)		
MLS5*Ins12			-0.2560 (0.1779)	
MLS5*Bank12				-0.3779*** (0.0986)
Size	0.0717*** (0.0073)	0.0660*** (0.0073)	0.0673*** (0.0074)	0.0641*** (0.0076)
Leve	-0.4152*** (0.0335)	-0.3855*** (0.0295)	-0.3526*** (0.0317)	-0.3178*** (0.0334)
Tang	0.0683** (0.0311)	0.0092 (0.0307)	0.0210 (0.0304)	-0.0308 (0.0335)
Grow	-0.0004*** (0.0001)	-0.0004*** (0.0001)	-0.0004*** (0.0001)	-0.0004*** (0.0001)
Age	0.0012 (0.0008)	0.0007 (0.0008)	0.0012 (0.0008)	0.0012 (0.0008)
Constant	-0.7889*** (0.0825)	-0.6106*** (0.0791)	-0.6330*** (0.0779)	-0.6114*** (0.0834)
Observations	2,340	2,328	2,328	2,328
Number of Groups	490	490	490	490
Number of Instruments	210	210	210	210
AR(1)	0.000130	0.000118	0.000164	0.000117
AR(2)	0.405	0.458	0.472	0.362
Hansen	0.184	0.254	0.137	0.258

Standard errors in parentheses\*\*\* p<0.01, \*\* p<0.05, \* p<0.1 This table reports the results using the type-dimension. *ROA* is the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *FAM12* is a dummy variable that equals one if the LCS and 1st MLS are a family and zero otherwise. *Ins12* is a dummy variable that equals one if the LCS and 1st MLS are institutional investors and zero otherwise. *Bank12* is a dummy variable that equals one if the LCS and 1st MLS are pressure-sensitive institutional investors and zero otherwise. The rest of the variables are defined in Table 5-5.

### 5.6.2. Firm value measure

Table 5-8 reports Model 5-2 after replacing *ROA* with TQs. Table 5-8 shows that *MLS5* is statically significant at the 5 % level. However, both *Number5* and *Hdis5* still hold the same sign without statistical significance.

**Table 5-8 The effect of MLS on firm performance (TQs).**

VARIABLES	(1) TQs	(2) TQs	(3) TQs	(4) TQs	(5) TQs	(6) TQs
TQs <sub>t-1</sub>	0.6803*** (0.0131)	0.6610*** (0.0118)	0.6654*** (0.0126)	0.6778*** (0.0139)	0.6670*** (0.0135)	0.6749*** (0.0140)
TQs <sub>t-2</sub>	0.1163*** (0.0084)	0.1055*** (0.0087)	0.1057*** (0.0087)	0.1019*** (0.0089)	0.1060*** (0.0096)	0.1233*** (0.0092)
MLS5	-0.2110** (0.0819)			-0.1866** (0.0932)	-0.1752 (0.1170)	-0.1533 (0.0969)
Number5		-0.0010 (0.0228)				
Hdis5			0.0007 (0.0037)			
Maj30*MLS5				-0.3398* (0.1956)		
MLS5* Same12					-0.0094 (0.1842)	
MLS5*Same123						- 2.0999*** (0.5433)
Size	-0.0125 (0.0186)	- 0.0444*** (0.0171)	-0.0045 (0.0185)	0.0040 (0.0194)	-0.0429** (0.0200)	-0.0097 (0.0196)
Leve	0.0717 (0.1097)	-0.1782* (0.0999)	-0.1603* (0.0956)	0.0530 (0.1174)	0.0136 (0.1148)	0.1199 (0.1108)
Tang	- 0.5928*** (0.1314)	- 0.5883*** (0.1331)	- 0.6505*** (0.1337)	- 0.7478*** (0.1432)	- 0.5724*** (0.1409)	- 0.5580*** (0.1397)
Grow	-0.0005 (0.0004)	-0.0004 (0.0004)	-0.0004 (0.0004)	0.0000 (0.0004)	-0.0009** (0.0004)	-0.0005 (0.0004)
Age	0.0105*** (0.0029)	0.0103*** (0.0025)	0.0043 (0.0029)	0.0071** (0.0029)	0.0057** (0.0028)	0.0107*** (0.0030)
Constant	0.6865*** (0.2045)	1.0308*** (0.1779)	0.6192*** (0.1969)	0.6382*** (0.2158)	1.2498*** (0.2049)	0.8218*** (0.2054)
Observations	2,140	2,140	2,140	2,140	2,130	2,130
Number of Groups	449	449	449	449	449	449
Number of Instruments	197	191	197	197	191	197
AR(1)	0.0009	0.0010	0.0009	0.0007	0.0011	0.0007
AR(2)	0.523	0.526	0.485	0.452	0.590	0.527
Hansen	0.233	0.141	0.133	0.257	0.176	0.180

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 This table reports the analysis using TQs.

### 5.6.3. Instrumental variable methods

As chapter four proposes, endogeneity is an ongoing issue in ownership structure empirical research. Although the results in section 5.5.2 provide consistent and robust estimators for all *MLSVAR* using the two-step GMM method, this section confirms the robustness of the results using (2SLS) and (PSM).

Regarding the former, this chapter follows Laeven and Levine (2008), Mishra (2011), and Paligorova and Xu (2012) , and it applies instrumental variables estimation using the average of independent variables for firms operating in the same industry. Such instruments are justified by the notion that each block's strategic investment policy is unlikely to affect the ownership structure of firms operating in the same industry (Mishra, 2011). Thus, three instruments are used for each independent variable, namely *IV\_MLS5*, *IV\_Number5*, and *IV\_Hdis5*. Each instrument is calculated using the industry average for *MLS5*, *Number5*, and *Hdis5*, respectively (Ben-Nasr et al., 2015; Boubaker et al., 2017; Jiang et al., 2018).

The 2SLS starts by estimating the first-stage regressions using each instrument and the rest of the control variables used in the main model in section 5.3. Table 5-9 (Panel B) shows each instrument's first-stage regression results along the F-tests of excluded instruments, the Shea Partial R<sup>2</sup>, and the Kleibergen-Paap LM statistic. As Table 5-9 (Panel B) shows, the results indicate positive and significant coefficients of all three instruments. Also, the F-tests of excluded instruments, the Shea Partial R<sup>2</sup>, and the Kleibergen-Paap LM statistic support the use of these instruments. The second stage regresses *ROA* against the fitted value of the instruments (*MLS5\_fitted*, *Number5\_fitted*, and *Hdis5\_fitted*). The results in Table 5-9 (Panel A) show a significant negative (positive) relationship between the presence and power (relative power) of *MLS* and *ROA*, providing additional support to **H1**, **H2**, and **H3**.

**Table 5-9 The effect of MLS on firm performance (ROA) using 2SLS.**

VARIABLES	(1) ROA	(2) ROA	(3) ROA
Panel A: Second-stage regressions			
MLS5_fitted	-1.3713*** (0.4284)		
Number5_fitted		-0.4646*** (0.1103)	
Hdis5_fitted			0.1346*** (0.0397)
Size	0.2785*** (0.0264)	0.3014*** (0.0285)	0.2470*** (0.0256)
Leve	-1.0034*** (0.2065)	-0.9590*** (0.2008)	-1.0707*** (0.2218)
Tang	0.0373 (0.1103)	-0.0072 (0.1106)	0.0929 (0.1314)
Grow	-0.0007 (0.0006)	-0.0005 (0.0006)	-0.0003 (0.0006)
Age	0.0023** (0.0010)	0.0007 (0.0012)	-0.0000 (0.0016)
Constant	-1.7506*** (0.3531)	-1.6431*** (0.3192)	-2.9867*** (0.2851)
Observations	2,839	2,839	2,839
R-squared	-0.0150	-0.0658	-0.3574
Panel B: First-stage regressions			
IV_MLS5	0.8892*** (0.1083)		
IV_Number5		0.8337*** (0.0832)	
IV_Hdis5			0.5869*** (0.0939)
Shea's partial R2	.02992	.03495	.01080
F-test of excluded instruments	67.43***	100.32***	39.08***
Kleibergen-Paap LM statistic:	61.95	90.14	37.82
Underidentification test	(p < 0.01)	(p < 0.01)	(p < 0.01)

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0. The definitions of the variables are the same as in Table 5-5

Regarding the PSM procedure, the chapter starts by considering the presence of MLS as the treatment variable and matching each firm with MLS with firms without MLS of similar characteristics (Dehejia and Wahba, 2002; Rosenbaum and Rubin, 1983). Thus, the PSM procedure yields in creating an “artificial control group”, allowing to estimate the impact of the presence of MLS. The subset includes 2,839 firm-year observations in which 340 observations without the presence of MLS. Once the treatment is identified and the subset is constructed, the chapter estimates the propensity scores using the following Probit model:

$$MLS5 = \beta_0 + \beta_1 Size + \beta_2 Leve + \beta_3 Tang + \beta_4 Age + \varepsilon$$

Table 5-10 ( Columns 1-3) shows the PSM sample results. The results support the analysis provided in Table 5-5 and Table 5-9.

**Table 5-10 The effect of MLS on firm performance (ROA) using PSM.**

VARIABLES	(1)	(2)	(3)	(4)
	ROA	ROA	ROA	MLS
	Results using PSM sample			Probit
MLS5	-0.0387** (0.0175)			
Number5		-0.0126** (0.0052)		
Hdis5			0.0016* (0.0009)	
Size	0.0926*** (0.0040)	0.0931*** (0.0041)	0.0916*** (0.0040)	0.1307*** (0.0218)
Leve	-0.4532*** (0.0307)	-0.4518*** (0.0306)	-0.4513*** (0.0307)	-0.3172** (0.1465)
Tang	0.1071*** (0.0239)	0.1058*** (0.0239)	0.1071*** (0.0239)	-0.0605 (0.1224)
Grow	-0.0003*** (0.0001)	-0.0003*** (0.0001)	-0.0003*** (0.0001)	
Age	0.0007* (0.0004)	0.0006 (0.0004)	0.0006* (0.0004)	-0.0001 (0.0022)
Constant	-0.9821*** (0.0424)	-0.9803*** (0.0424)	-1.0111*** (0.0410)	-0.0247 (0.2230)
Observations	2,839	2,839	2,839	3,220
R-squared	0.2225	0.2228	0.2220	
Adjusted R <sup>2</sup>	0.2208	0.2211	0.2204	
Pseudo-R <sup>2</sup>				0.0194

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0. The definitions of the variables are the same as in Table 5-5

## **5.7 Summary and conclusions**

This chapter presented and discussed the results of the first two research questions: Q1: what is the effect of the presence, number, and relative size of MLS on firm performance in AIM? Q2: What is the effect of MLS type on the relationship between the presence of MLS and firm performance in AIM? The chapter started with an outline of the development of the ownership structure. Then, based on the research questions, four hypotheses are assumed with the help of previous theoretical and empirical studies. The study proposed that MLS are more prone to form a coalition to expropriate minority shareholders in AIM. The study used a variety of MLS proxies, including the presence, number, and relative power.

Moreover, the study introduced an interaction term between the presence of MLS and the type-dimension to separate the general effect of MLS from the type of effect of MLS. The chapter revealed that MLS presence is relatively high, and blocks are comparable in size in the AIM. The results indicated that MLS harm their firms by forming a coalition with the LCS. The coalition formation is evidenced by the negative (positive) relationship between the presence, number, and (relative power ) of MLS. The chapter concluded with an additional test and robustness checks which confirm the main results.

## **Chapter 6 : The Effect of Multiple Large Shareholders on Audit Fees**

### **6.1 Introduction**

Many studies have shed light on the agency conflict between the largest controlling shareholder and minority shareholders<sup>29</sup> (Harvey et al., 2004; Holderness, 2009; La Porta et al., 1999, p. 543; Lin et al., 2013; Shleifer and Vishny, 1986). In this regard, minority shareholders have limited power due to their high numbers and lower percentages of total holding. Therefore, minority shareholders are exposed to the risk of expropriation from the management or the LCS. In the same line, many regulations are set to provide legal protection in the form of internal monitoring or external auditing. For example, the International Standard on Auditing (ISA) 315 asserts that auditors must understand the nature of the audited firm - including its ownership structure- and assess the associated risk with its nature. Based on this requirement, auditors may perceive the principal-principal conflict as a higher audit risk, which will inevitably lead to higher audit efforts and fees (Chan et al., 1993; Davis and Ricchiute, 1993; Fields et al., 2004; O'Keefe et al., 1994; Palmrose, 1986; Simon and Francis, 1988; Simunic, 1980; Zhang et al., 2007). Therefore, firms with severe agency conflict (i.e., with one controller and minority shareholders) are exposed to high agency costs and high audit fees (Francis and Dechow, 2008; Kurt A et al., 2013).

However, recent studies have documented the presence of MLS in which the agency conflict is mainly between MLS and the LCS (Attig et al., 2009; Attig et al., 2013; Ben-Nasr et al., 2015; Boubaker et al., 2016). In this regard, MLS have the incentive and power to monitor the LCS and the management using two methods: the voice and exit. Voice engagement is self-explained<sup>30</sup>; however, exit is considered new to the literature. Since MLS are informed traders, they can affect the share price. This ability can allow them to impact the management and the LCS more than previously assumed. For example, two shareholders of the same type with 5% each can force the management or the LCS to implement some actions. Otherwise, they will threaten to sell their shares, which will push the share price toward fundamental value, affecting the wealth of other shareholders. Due to the additional internal monitoring provided by MLS, it is assumed that auditors would reduce audit risk (Chung et al., 2002; Velury and Jenkins, 2006). Eventually, the firm will incur lower audit fees.

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<sup>29</sup> In this study, non-controlling shareholders or minority shareholders refer to shareholders holding less than 5%.

<sup>30</sup> Detailed examples are provided in section two.

However, MLS can play a contradicting view in which they will use their power to form a coalition with the LCS. In this regard, Zwiebel (1995) outlines that large shareholders with comparable block holding are likely to work with each other to divert corporate resources. The diversion is attained through the division of PBC. Kahn and Winton (1998) confirm that MLS can trade on private information through the exit method. In this regard, MLS will use their power to expropriate other shareholders. In addition, Gomes and Novaes (2006) argue that firms characterised by MLS presence are not efficient compared to those with only one large controlling shareholder. Based on this argument, the entrenchment effect of MLS can lead to high agency conflicts in which the auditors will increase the audit risk, which will lead to high audit efforts and fees.

This chapter contributes to the existing literature in many ways. First, there has been a continuous debate on the extent and value of the auditing process and its value in enhancing the financial reporting quality. For example, the Economist (2018) outlines that European auditing firms face increasing pressure from investors, governments, and the public to enhance audit quality. This pressure was noted following the financial crisis in 2007-2009. Second, the substitutability or complementarity of C.G. mechanisms is an ongoing issue that has not been resolved (Becher and Frye, 2011). In other words, large shareholders' effect on firm-level attributes and outcomes is an ongoing issue. In the same line, the link between stakeholder activities and external auditing is not fully understood (Aguilera et al., 2015).

This chapter provides evidence on how MLS can exercise their control to either limit the LCS's power or collude with LCS to share private benefits of control. Both roles can bring more evidence on the effect of ownership structure on external monitoring mechanisms such as auditing. Thus, this study provides insight into the relationship between ownership structure and audit fees, considering it a continuous construct. In summary, this study aims to provide evidence on the relationship between MLS and audit fees and precisely seeks to answer the following:

Q3: What is the effect of MLS presence, number, and relative power on audit fees in AIM?

Q4: What is the effect of the type-dimension of MLS on the relationship between the presence of MLS and audit fees in AIM?

The chapter is structured as follows: hypotheses development, descriptive statistics, empirical results, and further analysis.

## **6.2 Hypothesis development**

The debate on agency problem has considered a new type of conflict known as the principal-principal conflict. The focus of this debate has received a huge investigation between the presence of one LCS and non-controlling shareholders (Claessens et al., 2000; Fan and Wong, 2002). However, most of these studies have neglected the incentives and power in which MLS affect many firms' outcomes and attributes. Nonetheless, recent studies have documented the dominant existence of MLS in almost every market around the globe (Attig et al., 2009; Attig et al., 2013; Boubaker et al., 2016; Cai et al., 2016). These studies confirm that MLS can bring two contrasting roles, mitigating or augmenting the principal-principal agency costs.

This section aims to build the argument of these two contrasting roles and understand their ultimate effect on audit fees. As the literature suggests, the mere presence or actual voting percentage cannot be the only valid proxy to evaluate the effect of MLS on firm-level attributes and outcomes (Edmans and Holderness, 2017). Other proxies - such as the number as in Jallow et al. (2012) and the relative power of MLS as in Laeven and Levine (2008) and Maury and Pajuste (2005) - are better for evaluating the effect of MLS on the overall outcomes and attributes of their firms. Thus, this chapter uses three proxies to evaluate the effect of MLS on audit fees: the presence, number, and the relative power of MLS. The argument continues to include the interaction of the type of MLS between MLS and audit fees.

### **6.2.1. The presence, number, relative size and type of MLS and audit fees**

As previously mentioned, the existence of MLS behind the LCS is evidenced in many markets around the world. In this regard, MLS monitoring can be accomplished through many channels using two methods, namely voice (i.e., activism) and exit. Due to their high stake, MLS can use the two intervention methods to play two contrasting roles. On the one hand, MLS can be considered harmful to their firm upon the existence of certain circumstances. MLS may choose to collude with the LCS to control corporate policy and eventually affect the firm's strategy (Bennedsen and Wolfenzon, 2000). By doing so, they will have the ability to expropriate other shareholders and share PBC (Zwiebel, 1995). Also, MLS can choose to collude to access important information held by the LCS (Cheng et al., 2013). As a result of this coalition formation effect, MLS bring an entrenchment effect, leading them to disuse their monitoring channels.

Empirical studies have documented such a coalition. For example, Wang (2017) shows that such a coalition appears in the U.S. Also, Cai et al. (2016) show that such a coalition is

evidenced in China. Hope et al. (2012) document such a coalition in private firms in Norway. In addition, Faccio et al. (2011) report that MLS in Asia can form coalitions to expropriate minority shareholders. Thus, the institutional setting is an integral part of the coalition formation effect. In this regard, the results of this study can be used to understand whether SME firms in the U.K. behave as their counterpart in the main market or follow the same trend as Asian firms.

On the contrary, theoretical studies show that MLS may choose to compete for control if the formation of a coalition is not attained (Gomes, 1999; Pagano and Röell, 1998). Thus, MLS will use their intervention channels (i.e., bargaining effect) to bring an efficient monitoring role. Empirical studies show that MLS can bring positive outcomes to their firms, thus benefitting minority shareholders (Attig et al., 2008; Laeven and Levine, 2008; Maury and Pajuste, 2005). MLS can mitigate the expropriation of private benefits by the LCS and reduce information asymmetry. Also, MLS seek to affect the firm's investment policy by taking higher risk-taking investment approaches (Boubaker et al., 2016). This risk-taking approach results in a higher firm evaluation. MLS can best exercise their role when the distribution of voting rights is equal among them, especially when the LCS is a family (Attig et al., 2013; Maury and Pajuste, 2005).

The proceeding argument support that MLS can play two contradicting roles. However, their ability to take one role over the other depends on the overall ownership structure and the features of the institutional settings. Therefore, as the AIM features align with the entrenchment effect, this study assumes that upon the presence of MLS, auditors are keen to perceive MLS as a potential audit risk which leads to higher audit fees (Francis et al., 2003). Therefore, this study proposes the following hypothesis:

***H<sub>5</sub>: The presence of MLS is positively associated with audit fees in AIM.***

Now, MLS presence is one proxy to examine the intervention effect of MLS. As previously mentioned, MLS presence can bring two contradicting outcomes: a positive effect to their firms due to effective monitoring because of the efficient-monitoring effect or a negative effect due to coalition with the LCS due to the entrenchment effect. Yet, the mere presence of MLS cannot explain the outcome of each role. Another proxy that is used to understand which outcome would occur is the number of MLS. In addition, MLS intervention using the voice method is affected by the number of MLS (Andrew, 1993; Edmans and Manso, 2011; Kahn and Winton, 1998; Noe, 2002). These theoretical models show that the number of MLS affects the strength

of voice through block size. Voice intervention is weakened if the total shares are divided among a higher number of MLS.

However, this assumption depends on the notion that each MLS works alone. Based on a theory of "wolf-pack" activism, Brav et al. (2016) assert that MLS can coordinate to engage in intervention instead of forming a coalition with the LCS. Thus, consistent with the MLS presence proxy, the effect of the number of MLS can take two contrasting situations. As argued by the entrenchment effect, the first situation supports that a higher number of MLS can be considered harmful to the firm; thus, monitoring is not accomplished. On the other hand, the "wolf-pack" theory supports that even with a higher number of MLS, they can still form a coalition and impose monitoring. Therefore, giving the argument supported in  $H_1$ ,  $H_5$  and the previous argument regarding the number of MLS, this study proposes the following hypothesis:

***H<sub>6</sub>: The number of MLS is positively associated with audit fees in AIM.***

Finally, the relative power of MLS is an important aspect. It explains how contestability situations work and what outcomes can reveal. Also, it represents how the distribution of the blocks among MLS can affect the level of interaction. In other words, the number of MLS can explain one side of the coalition formation; however, the relative size of MLS can enhance the interpretation of the results. Maury and Pajuste (2005) assure that both the type and relative size of MLS can affect the extraction of private benefits of control. Thus, using the same logic in  $H_5$  and  $H_6$ , this study proposes that:

***H<sub>7</sub>: More comparable voting rights between large shareholders increase firm performance in AIM.***

### **6.2.2. The type of second-largest shareholder behind an LCS**

Some studies on MLS have considered only the actual voting percentage or relative power to establish evidence of MLS intervention (Attig et al., 2006; Laeven and Levine, 2007; Maury and Pajuste, 2005). Other studies have tried to add more interpretation to the results by adding the type-dimension. However, most of these studies have focused on family holding (Ali et al., 2020; Fattoum-Guedri et al., 2018; Maury, 2006) and neglected other MLS types that can affect the interpretation of the results. This is related to the aspect that family firms are more prone to exercise power due to their ability to use both voice and exit methods. However, Edmans and Holderness (2017) outline that "blockholders are heterogeneous: they include institutions (e.g. hedge funds, mutual funds, and pension funds), individuals, and other corporations. Each has its own determinants, incentives, and consequences; these considerations are likely to vary

by country. Most research, however, treats all blockholders as homogenous" (Edmans and Holderness, 2017, p. 543). In addition, intervention methods depend on MLS type since each type has different beliefs, skills, or preferences (Becker et al., 2011; Cronqvist and Fahlenbrach, 2009). As this study seeks to enrich ownership structure research, it considers the homogeneity of MLS and examines its impact on the intensity of the results.

As established in 6.2.1, MLS do not work in isolation. In other words, MLS interact with each other. Thus, one type of MLS can empower or limit the role of another type. Empirical research that considers different types of MLS in one analysis is limited. Many studies advocate that certain types are more prone to exercise monitoring without concluding whom would exercise better monitoring (Ducassy and Guyot, 2017). However, the standing point of the argument is that shareholders of the same type will have the same objectives and will work toward the same goals. Maury and Pajuste (2005) and Jara-Bertin et al. (2008) advocate this point and show that coalitions are less likely among heterogeneous shareholders. For example, coalitions between family and institutional holdings are difficult due to high opportunity costs. In this regard, the opportunity costs for family holding are high due to reputation damage. At the same time, the opportunity costs for institutional holding are high due to regulatory supervision and sanctions. In contrast, shareholders of the same type are more likely to work together because they share common goals (Bennedsen and Wolfenzon, 2000; Laeven and Levine, 2007). Therefore, this study proposes the following hypothesis:

***H<sub>8</sub>: MLS homogeneity increases the intensity of the relationship between MLS presence and audit fees in AIM.***

### **6.3 Model specification**

This section provides more information on the application of GMM. As mentioned in section 3.6, one should identify the number of relevant lags regarding the previous dependent variable. In this regard, the study first runs the following model using pooled OLS:

**Model 6-1**

$$Fees_{it} = \alpha_1 + \sum_{p=1}^3 Fees_{it-p} + \gamma Z_{it} + \epsilon_{it} \quad p = 1, \dots, 3$$

$Z_{it}$  is one of the control variables ( *Size*, *Leve*, *IntSle*, *Invrec*, *CRatio*, *IFRS* and *Loss*). Once the OLS estimation provides a statistical significance between the current and lag dependent

variable, they can be used as valid instruments. However, once historical dependent variables provide no statistical significance, they cannot be used as valid instruments. Regarding the main analysis, this study adopts the following dynamic model to test the first three hypotheses:

**Model 6-2**

$$\begin{aligned} \text{Fees}_{i,t} = & \alpha_t + \alpha_i + \text{Fees}_{i,t-1} + \beta_1 \text{MLSVAR}_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{Leve}_{i,t} + \beta_4 \text{IntSale}_{i,t} \\ & + \beta_5 \text{Invrec}_{i,t} + \beta_6 \text{CRatio}_{i,t} + \beta_7 \text{IFRS}_{i,t} + \beta_8 \text{Loss}_{i,t} + \varepsilon_{i,t} \end{aligned}$$

Consistent with recent studies, *Fees* equals the natural logarithm of audit fees (Ali et al., 2020; Jallow et al., 2012). *MLSVAR* is one of the ownership variables (i.e., *MLS5*, *Number5*, and *Hdis5*). *MLS5* is a dummy variable that tests the presence of MLS at the 5% threshold. As established in *H*<sub>5</sub>, auditors perceive MLS as a potential audit risk that increases audit fees. Thus, this study expects a positive relationship between *Fees* and *MLS5*. *Number5* equals the number of MLS behind the largest shareholder up to the fourth shareholder at the 5% threshold<sup>31</sup>. As established in the hypotheses section, this study assumes a positive relationship between *Number5* and *Fees*.

Moreover, this study adopts the Herfindahl dispersion measure to understand the dispersion between the LCS and MLS. In this regard, low dispersion between the LCS and MLS indicates that shares are equally distributed, making the wedge between the LCS and MLS lower. This increases the possibility of forming a controlling coalition with the LCS to expropriate other shareholders (Cai et al., 2016). Thus, *Hdis5* is expected to impact *Fees* negatively.

Furthermore, the type-dimension is added to the main analysis using an interaction term between *MLS5* and *Type* using the following model:

**Model 6-3**

$$\begin{aligned} \text{Fees}_{i,t} = & \alpha_t + \alpha_i + \text{Fees}_{i,t-1} + \beta_1 \text{MLS5}_{i,t} * \text{Type}_{i,t} + \beta_2 \text{Size}_{i,t} + \beta_3 \text{Leve}_{i,t} + \beta_4 \text{IntSale}_{i,t} \\ & + \beta_5 \text{Invrec}_{i,t} + \beta_6 \text{CRatio}_{i,t} + \beta_7 \text{IFRS}_{i,t} + \beta_8 \text{Loss}_{i,t} + \varepsilon_{i,t} \end{aligned}$$

In this regard, *type* is a measure of MLS homogeneity, and it is either *Same12* or *Same123*. As established in *H*<sub>8</sub>, this study assumes a higher intensity of the association between *MLS5* and *Fees* when homogeneity increases. Finally, since this study employs the Two-step GMM method, it is assumed that both *Fees* and *MLSVAR* are endogenous along with financial

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31 This study considers four MLS behind the LCS to make sure that no shareholder at the 5% threshold is excluded from the analysis.

control measures (i.e., *Size*, *Leve*, *Int-Sale*, *Inv-rec*, and *CRatio*). These are used as instrumental variables in the GMM specification. The rest of the control variables (*IFRS* and *loss*), along with industry and year effects, are assumed to be exogenous.

## 6.4 Descriptive statistics

Table 6-1 shows the descriptive statistics of the variables used in the analysis. Table 6-1 shows that the natural logarithm of audit fees (*Fees*) has a mean (standard deviation) of 3.966 (0.897) which is constant with Ali et al. (2020), who report a mean (standard deviation) of 5.872 (1.552).

**Table 6-1 Summary statistics audit fees and related control variables.**

	N	Mean	max	min	Std. Dev.	p25	Median	p75
Fees	5518	3.966	6.184	1.973	.897	3.334	3.912	4.575
Size	5655	9.902	13.562	5.351	1.67	8.78	9.955	11.125
Leve	4268	.172	1.378	.001	.219	.035	.101	.231
Int-Sale	2569	.443	2.387	.001	.463	.103	.302	.618
Inv-Rec	3017	.261	0.790	.005	.191	.099	.232	.397
CRatio	5652	3.556	21.166	.2	4.657	1.032	1.734	3.707
IFRS	5645	.951	1.000	0	.215	1	1	1
Loss	5657	.555	1.000	0	.497	0	1	1

This table shows descriptive statistics for the variables used in the main analysis. *Fees* is the natural logarithm of audit fees in thousands of GBP. *SIZE* is the natural logarithm of total assets in thousands of GBP. *LEVE* equals total debt divided by total assets. *Int-Sale* is the ratio of international sales divided by total sales. *Int-Sale* is the ratio of international sales divided by total sales. *Inv-rec* is the sum of inventories and accounts receivable scaled by total assets. *CRatio* is the ratio of current assets to current liabilities at the end of the fiscal year. *IFRS* is a dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise. *Loss* is a dummy variable that equals one if the firm reports a net loss in year t (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise. *Hdis5*, *Size*, *Leve*, *Int-Sale*, and *Inv-rec* are winsorised at the 1st and 99th percentiles. *CRatio* is winsorised at the 3rd and 97th percentiles.

Table 6-2 and Table 6-3 provide tests about multicollinearity. First, Table 6-2 provides the VIF test using three proxies of MLS against *Fees*. Table 6-3 reports the Pearson pairwise correlation coefficients for all variables used in the analysis. The table confirms that all MLS variables are consistent with the hypotheses. In this regard, *MLS5*, *Number5*, and (*Hdis5*) positively (negatively) impact *Fees*.

Moreover, Table 6-3 shows a high correlation between MLS variables, which is expected because each variable is a separate MLS proxy. The highest two coefficients do not exceed 0.404 in absolute value regarding the control variables. Still, Gujarati et al. (2012) outlined that the multicollinearity issue persists when the coefficient exceeds the 0.8 threshold.

**Table 6-2 Variance inflation factor (empirical chapter two).**

	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
MLS5	1.019	.981				
Number5			1.03	.971		
Hdis5					1.105	.905
Inv-Rec	1.354	.739	1.354	.738	1.354	.739
Int-Sale	1.229	.814	1.228	.814	1.239	.807
Loss	1.221	.819	1.22	.82	1.222	.818
Size	1.168	.856	1.177	.85	1.153	.867
IFRS	1.041	.961	1.041	.96	1.128	.886
Leve	1.075	.93	1.073	.932	1.073	.932
CRatio	1.085	.922	1.088	.92	1.085	.922
Mean VIF	1.149	.	1.151	.	1.17	.

This table shows VIF tests using three separate OLS regressions, using *MLS5*, *Number5*, or *Hdis5*. *SIZE* is the natural logarithm of total assets in thousands of GBP. *LEVE* equals total debt divided by total assets. *Int-Sale* is the ratio of international sales divided by total sales. *Int-Sale* is the ratio of international sales divided by total sales. *Inv-rec* is the sum of inventories and accounts receivable scaled by total assets. *CRatio* is the ratio of current assets to current liabilities at the end of the fiscal year. *IFRS* is a dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise. *Loss* is a dummy variable that equals one if the firm reports a net loss in year *t* (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise. *Hdis5*, *Size*, *Leve*, *Int-Sale*, and *Inv-rec* are winsorised at the 1st and 99th percentiles. *CRatio* is winsorised at the 3rd and 97th percentiles

**Table 6-3 Pairwise correlations MLS and audit fees.**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Fees	1.000												
(2) MLS5	0.086 (0.000)	1.000											
(3) Number5	0.145 (0.000)	0.769 (0.000)	1.000										
(4) Hdis5	-0.057 (0.000)	-0.274 (0.000)	-0.352 (0.000)	1.000									
(5) Same12	-0.024 (0.099)	-0.021 (0.157)	-0.035 (0.018)	0.025 (0.098)	1.000								
(6) Same123	-0.036 (0.014)	0.128 (0.000)	0.072 (0.000)	-0.033 (0.028)	0.568 (0.000)	1.000							
(7) Size	0.790 (0.000)	0.091 (0.000)	0.146 (0.000)	-0.023 (0.124)	-0.037 (0.010)	-0.034 (0.018)	1.000						
(8) Leve	0.009 (0.541)	-0.049 (0.004)	-0.049 (0.004)	0.104 (0.000)	0.025 (0.132)	0.018 (0.273)	-0.037 (0.015)	1.000					
(9) Int-Sale	0.113 (0.000)	0.003 (0.903)	0.005 (0.816)	0.061 (0.006)	-0.010 (0.645)	-0.061 (0.004)	-0.034 (0.087)	0.017 (0.435)	1.000				
(10) Inv-Rec	0.031 (0.093)	-0.036 (0.074)	-0.065 (0.002)	0.074 (0.000)	-0.002 (0.918)	-0.010 (0.603)	-0.062 (0.001)	-0.109 (0.000)	0.404 (0.000)	1.000			
(11) CRatio	-0.270 (0.000)	-0.007 (0.646)	-0.010 (0.515)	-0.005 (0.721)	0.007 (0.626)	0.007 (0.610)	-0.118 (0.000)	-0.135 (0.000)	-0.154 (0.000)	-0.114 (0.000)	1.000		
(12) IFRS	0.180 (0.000)	0.013 (0.377)	0.069 (0.000)	-0.202 (0.000)	-0.115 (0.000)	-0.160 (0.000)	0.187 (0.000)	-0.111 (0.000)	-0.058 (0.003)	-0.054 (0.003)	-0.043 (0.001)	1.000	
(13) Loss	-0.311 (0.000)	-0.019 (0.204)	-0.039 (0.010)	-0.029 (0.056)	0.032 (0.028)	0.046 (0.001)	-0.404 (0.000)	0.099 (0.000)	-0.199 (0.000)	-0.230 (0.000)	0.220 (0.000)	-0.014 (0.292)	1.000

This table shows the Pearson pairwise correlation for the variables used in the main analysis. *Fees* is the natural logarithm of audit fees in thousands of GBP. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of large shareholders behind the largest up to fourth. *Hdis5* is the sum of squares of the differences for each shareholder. *Same12* is a dummy variable that equals one if the LCS and the first MLS are from the same type and zero otherwise. *Same123* is a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. *SIZE* is the natural logarithm of total assets in thousands of GBP. *LEVE* equals total debt divided by total assets. *Int-Sale* is the ratio of international sales divided by total sales. *Int-Sale* is the ratio of international sales divided by total sales. *Inv-Rec* is the sum of inventories and accounts receivable scaled by total assets. *CRatio* is the ratio of current assets to current liabilities at the end of the fiscal year. *IFRS* is a dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise. *Loss* is a dummy variable that equals one if the firm reports a net loss in year t (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise. *HDIS*, *Size*, *Leve*, *Int-Sale*, and *Inv-rec* are winsorised at the 1st and 99th percentiles. *CRatio* is winsorised at the 3rd and 97th percentile.

## **6.5 Empirical evidence and discussion**

This section provides the results using the models provided in section 6.3. The first step is to test the appropriate number of lags to be used in the main analysis. The following subsection provides such tests.

### **6.5.1. Testing number of lags**

Table 6-4 reports the results using pooled OLS regression. Table 6-4 (Column 1) shows the effect of four historical *Fees* values on the current *Fees*. In addition, Table 6-4 (Column 2) shows the effect of the previous third and fourth historical *Fees* on the current *Fees*. One can note that up to three-year historical values of *Fees* are statistically significant with current *Fees*. Therefore, using these historical values as an endogenous instrument in the GMM specifications from lag three is appropriate.

**Table 6-4 Lags on audit fees.**

	(1) Fees	(2) Fees
Fees <sub>t-1</sub>	.706*** (.0452)	
Fees <sub>t-2</sub>	.1262*** (.0485)	
Fees <sub>t-3</sub>	-.1004** (.0448)	.4612*** (.048)
Fees <sub>t-4</sub>	.0349 (.0278)	.0262 (.0442)
Size	.1323*** (.0157)	.2891*** (.0157)
Leve	.0963** (.0424)	.1279** (.0547)
Int-sale	.0285 (.0227)	.1074*** (.0302)
Inv-rec	.0053 (.061)	.0161 (.0838)
CRatio	-.0092*** (.0034)	-.0208*** (.0049)
IFRS	.2497*** (.0746)	.5008*** (.0852)
Loss	.0225 (.0193)	.1177*** (.0259)
Constant	-.623*** (.1322)	-1.3364*** (.1518)
Observations	861	869
R-squared	.917	.8325
Year dummies	yes	yes
Industry dummies	yes	yes

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows pooled OLS results. *Fees* is the natural logarithm of audit fees in thousands of GBP. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals total debt divided by total assets. *Int-Sale* is the ratio of international sales divided by total sales. *Int-Sale* is the ratio of international sales divided by total sales. *Inv-rec* is the sum of inventories and accounts receivable scaled by total assets. *CRatio* is the ratio of current assets to current liabilities at the end of the fiscal year. *IFRS* is a dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise. *Loss* is a dummy variable that equals one if the firm reports a net loss in year t (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise. *Hdis5*, *Size*, *Leve*, *Int-Sale*, and *Inv-rec* are winsorised at the 1st and 99th percentiles. *CRatio* is winsorised at the 3rd and 97th percentiles

### 6.5.2. Main results

Table 6-5 presents the results for the main analysis in this chapter. The validity of the results is outlined in the last six rows of the table. AR (2) suggests no autocorrelation and confirms the validity of Table 1-5. The Hansen test provides evidence that the instruments are valid. The natural logarithm of audit fees (*Fees*) is regressed against three MLS variables, namely *MLS5*, *Number5*, and *Hdis5*. Table 6-5 (Column 1) shows that the *MLS5* positively impacts *Fees* at the 1% significant level in the short run. The positive impact of *MLS5* translates into a 0.08841 increase in *Fees*, on average ceteris paribus. Also, Table 6-5 (Column 2) shows that *Number5* has a positive impact on *Fees* at the 1% significant level in the short run, reflecting a 0.04395 increase in *Fees*, on average ceteris paribus. Moreover, Table 6-5 (Column 3) shows the effect of block dispersion among the largest five shareholders on audit fees. The results indicate that a percentage change in *Hdis5* is associated with a 0.268% decrease in *Fees* in the short run, at the 1% significance level on average ceteris paribus.

Regarding control variables, Table 6-5 shows that their coefficient signs are mostly consistent with prior audit fee literature (Ali et al., 2020; El Ghouli et al., 2018). For example, Table 6-5 shows a positive relation ( $p < 0.001$ ) between *Fees* and *Size* across all specifications (1–3).

Table 6-5 suggests that the presence and number of MLS are associated with higher audit fees, leading to accepting  $H_5$  and  $H_6$ . In the same line, the relative size of MLS is associated with lower audit fees, confirming  $H_7$ . The findings suggest that auditors consider MLS a potential risk in the AIM market, leading to higher audit fees. These findings are consistent with the finding in chapter five, in which MLS are associated with lower firm value, supporting the entrenchment hypothesis. The results are in line with prior empirical research. For example, Barroso et al. (2018) outline that audit fees are likely to increase when type two agency conflict is high. Moreover, the results are consistent with Mortazian et al. (2019), who support that large shareholders expropriate their firm when their block holding reaches 32%.

**Table 6-5 The effect of MLS on audit fees.**

VARIABLES	(1) Fees	(2) Fees	(3) Fees
Fees <sub>t-1</sub>	0.7262*** (0.0073)	0.7257*** (0.0073)	0.7149*** (0.0008)
MLS5	0.0884*** (0.0065)		
Number5		0.0439*** (0.0031)	
Hdis5			-0.0027*** (0.0001)
Size	0.1337*** (0.0053)	0.1333*** (0.0061)	0.1539*** (0.0010)
Leve	0.1191*** (0.0176)	0.0752*** (0.0180)	0.0553*** (0.0027)
Int-sale	0.0048 (0.0098)	0.0090 (0.0107)	-0.0236*** (0.0020)
Inv-rec	-0.0261 (0.0218)	0.0048 (0.0216)	0.0316*** (0.0067)
CRatio	-0.0036*** (0.0014)	-0.0034*** (0.0013)	-0.0058*** (0.0002)
IFRS	0.2234*** (0.0268)	0.1941*** (0.0254)	0.1283*** (0.0015)
Loss	0.0581*** (0.0040)	0.0632*** (0.0045)	0.0746*** (0.0008)
Constant	-0.4698*** (0.0503)	-0.5128*** (0.0468)	-0.4465*** (0.0096)
Observations	1,179	1,179	1,179
Number of Groups	269	269	269
Number of Instruments	217	217	251
AR(1)	1.81e-07	1.27e-07	1.15e-07
AR(2)	0.307	0.366	0.360
Hansen	0.306	0.524	0.429

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the results of the main analysis. *Fees* is the natural logarithm of audit fees in thousands of GBP. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of large shareholders behind the largest up to fourth. *Hdis5* is the sum of squares of the differences for each shareholder. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals total debt divided by total assets. *Int-Sale* is the ratio of international sales divided by total sales. *Int-Sale* is the ratio of international sales divided by total sales. *Inv-rec* is the sum of inventories and accounts receivable scaled by total assets. *CRatio* is the ratio of current assets to current liabilities at the end of the fiscal year. *IFRS* is a dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise. *Loss* is a dummy variable that equals one if the firm reports a net loss in year t (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise. *Hdis5*, *Size*, *Leve*, *Int-Sale*, and *Inv-rec* are winsorised at the 1st and 99th percentiles. *CRatio* is winsorised at the 3rd and 97th percentiles

Overall, the results confirm the entrenchment hypothesis and show a positive relationship between audit fees and the presence, number, and relative size of MLS. In this regard, the

results can be interpreted using the following logic. In AIM, both the LCS and MLS form a coalition to divert corporate resources and extract PBC. From the auditors' view, entrenched owners – both the LCS and MLS – are considered a potential risk due to their role in exaggerating type two agency conflict. Consequently, auditors increase their audit effort and, eventually, audit fees in the AIM firms. The following section provides more evidence on the role of the type dimension.

### **6.5.3. Results by the type-dimension**

Table 6-6 refers to the analysis of the type-dimension effect on the relationship between MLS and audit fees. The results in Table 6-6 show the effect of the homogeneity of the top two and three largest shareholders on the results reported in Table 6-5. Table 6-6 (Column 1) shows the effect of MLS presence when the largest two shareholders are from the same type. One can note that a percentage increase of the interaction term is associated with a 16.83 % increase in *Fees* in the short run, at the 1% significance level on average ceteris paribus. Moreover, Table 6-6 (Column 2) shows that the coefficient of the interaction term is positive and significant at the 1% significant level, suggesting that a percentage increase of the interaction term is associated with a 77.25% increase in *Fees* in the short run, at the 1% significance level on average ceteris paribus.

The results are consistent with the argument provided by Bloch and Hege (2003), who state that MLS of different types are better at exercising effective control. However, if MLS are of the same type, their added value to monitoring is redundant. Therefore, MLS aims to share PBC as outlined in (Zwiebel, 1995). The sharing of PBC is optimal when the controlling power is shared equally between the two primary shareholders (Bloch and Hege, 2003). This is exactly the case in the AIM. In chapter four, the descriptive statistics section shows that *Hdis5* is relatively low, indicating that the dispersion of blocks is low. Therefore, the entrenchment hypothesis is confirmed again using the type-dimension, and the relationship between *Fees* and *MLS5* becomes more intense. Also, Laeven and Levine (2008) confirm this argument by outlining that cooperation becomes more attainable when the blocks are of the same types when power is balanced. Therefore, using the type-dimension ensures this chapter's central premise: type two agency conflict increases audit efforts and fees (Simunic, 1980).

**Table 6-6 The effect of MLS homogeneity on audit fees.**

VARIABLES	(1) Fees	(2) Fees
Fees <sub>t-1</sub>	0.7517*** (0.0074)	0.7499*** (0.0066)
MLS5*Same12	0.1683*** (0.0222)	
MLS5*Same123		0.7725*** (0.1670)
Size	0.1291*** (0.0054)	0.1247*** (0.0046)
Leve	0.1468*** (0.0148)	0.1119*** (0.0179)
Int-sale	0.0099 (0.0097)	-0.0362*** (0.0111)
Inv-rec	-0.0293 (0.0249)	0.0120 (0.0272)
CRatio	0.0050*** (0.0013)	0.0041*** (0.0010)
IFRS	0.2108*** (0.0422)	0.1591*** (0.0313)
Loss	0.0523*** (0.0054)	0.0515*** (0.0054)
Constant	-0.4829*** (0.0609)	-0.3962*** (0.0410)
Observations	1,168	1,168
Number of Groups	269	269
Number of Instruments	217	217
AR(1)	9.91e-08	9.32e-08
AR(2)	0.313	0.314
Hansen	0.368	0.414

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the results of the main analysis. *Fees* is the natural logarithm of audit fees in thousands of GBP. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Same12* is a dummy variable that equals one if the LCS and first MLS are from the same type and zero otherwise. *Same123* is a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals total debt divided by total assets. *Int-Sale* is the ratio of international sales divided by total sales. *Int-Sale* is the ratio of international sales divided by total sales. *Inv-rec* is the sum of inventories and accounts receivable scaled by total assets. *CRatio* is the ratio of current assets to current liabilities at the end of the fiscal year. *IFRS* is a dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise. *Loss* is a dummy variable that equals one if the firm reports a net loss in year t (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise. *Size*, *Leve*, *Int-Sale*, and *Inv-rec* are winsorised at the 1st and 99th percentiles. *CRatio* is winsorised at the 3rd and 97th percentiles.

## 6.6 Additional analysis

This section revisits the results reported in Table 6-5. It provides more evidence on the role of MLS homogeneity by considering the most dominant two types in the sample: family and institutional holdings. In addition, this section provides evidence using two estimation methods: Propensity Score Matching (PSM) and Two-Stage least squares (2SLS) regression analysis. Finally, the section concludes by presenting the main results with the effect of audit firms' size (Big4).

### 6.6.1. Additional analysis with specific MLS type on audit fees

Table 1 6 concludes that the presence of MLS negatively affects firm performance after adding the type-dimension. This section revisits Model 5-3 and adds more evidence regarding the largest three types presented in the sample. Compared with the results in Table 6-6 (Columns 1 and 2), Table 6-7 (Column 1) shows that the interaction term between *MLS5* and *Maj30* exhibits a negative statistical significance impact at the 1% significance level. The results of such interaction shed more evidence on the coalition formation effect. The interaction term between *MLS5* and *Maj30* increases the intensity of the relationship between *MLS* and firm performance compared to the results reported in the main analysis.

As Table 6-7 shows, the results are still robust and reflect that *MLS5* positively impacts *Fees* across three specifications (Columns 1,2 and 4). Table 6-7 (Column 1) assures auditors' reaction to the coalition formation effect. The combined effect of both the *LCS* and *MLS* translates into a 5.11% increase in *Fees*, in the short run, at the 1% significance level on average *ceteris paribus*.

The results also show that the presence of a family type as the largest two shareholders is associated with a .7950 increase in *Fees* in the short run, at the 1% significance level on average *ceteris paribus*. The results align with Attig et al. (2008), who document that firms with an *LCS* and first *MLS* as a family are associated with a higher risk of expropriation. Such expropriation is attained through the coalition formation process.

In addition, Table 6-7 (Column 4) shows that the combined effect of the presence of top two shareholders who are pressure-sensitive institutional investors is associated with a 9.275% increase in *Fees*. Compared with the results in Table 6-7 (Column 2), one can note that the coalition formation effect is more severe when the largest two shareholders are of a family type.

**Table 6-7 Additional analysis with specific MLS type on audit fees.**

VARIABLES	(1) Fees	(2) Fees	(3) Fees	(4) Fees
Fees <sub>t-1</sub>	0.7418*** (0.0037)	0.7513*** (0.0124)	0.7565*** (0.0106)	0.7533*** (0.0116)
MLS5*Maj30	0.0511*** (0.0050)			
MLS5*Fam12		0.7950*** (0.0580)		
MLS5*Ins12			0.0591 (0.0567)	
MLS5*Bank12				0.0927* (0.0471)
Size	0.1247*** (0.0033)	0.1279*** (0.0092)	0.1151*** (0.0075)	0.1180*** (0.0085)
Leve	0.0720*** (0.0100)	0.0936*** (0.0278)	0.1038*** (0.0272)	0.1232*** (0.0295)
Int-sale	-0.0225*** (0.0054)	-0.0093 (0.0175)	-0.0319** (0.0148)	-0.0358** (0.0157)
Inv-rec	-0.0087 (0.0062)	-0.0215 (0.0386)	-0.0226 (0.0375)	-0.0269 (0.0362)
CRatio	-0.0002 (0.0004)	0.0022 (0.0020)	0.0045** (0.0018)	0.0013 (0.0020)
IFRS	0.3198*** (0.0026)	0.1761*** (0.0662)	0.2805*** (0.0503)	0.2907*** (0.0523)
Loss	0.0450*** (0.0028)	0.0604*** (0.0076)	0.0439*** (0.0062)	0.0482*** (0.0063)
Constant	-0.4841*** (0.0233)	-0.4319*** (0.0770)	-0.4366*** (0.0717)	-0.4326*** (0.0822)
Observations	1,179	1,168	1,168	1,168
Number of Groups	269	269	269	269
Number of Instruments	244	188	192	192
AR(1)	1.28e-07	6.24e-06	1.58e-07	1.78e-08
AR(2)	0.379	0.226	0.328	0.366
Hansen	0.562	0.298	0.148	0.326

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the results of the main analysis. Fees is the natural logarithm of audit fees in thousands of GBP. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *FAM12* is a dummy variable that equals one if the LCS and 1st MLS are a family and zero otherwise. *Ins12* is a dummy variable that equals one if the LCS and 1st MLS are institutional investors and zero otherwise. *Bank12* is a dummy variable that equals one if the LCS and 1st MLS are pressure-sensitive institutional investors and zero otherwise. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals total debt divided by total assets. *Int-Sale* is the ratio of international sales divided by total sales. *Inv-rec* is the sum of inventories and accounts receivable scaled by total assets. *CRatio* is the ratio of current assets to current liabilities at the end of the fiscal year. *IFRS* is a dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise. *Loss* is a dummy variable that equals one if the firm reports a net loss in year t (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items) and 0 otherwise. *Size*, *Leve*, *Int-Sale*, and *Inv-rec* are winsorised at the 1st and 99th percentiles. *CRatio* is winsorised at the 3rd and 97th percentiles

### 6.6.2. Instrumental variable methods

As mentioned in chapter four, endogeneity exists in ownership structure empirical research. This section aims to confirm the robustness of the main results using the same methods provided in the last chapter. This chapter proposes that firms' level attributes, outcomes, and information systems affect the choice of the nominated auditor. In other words, auditors are not randomly chosen by the audited firm, but the choice depends on the firm's characteristics (Chaney et al., 2004; Ho and Kang, 2013).

Regarding the 2SLS technique, the first-stage regression uses the average independent variables (*IV\_MLS5*, *IV\_Number5*, and *IV\_hdis5*) for firms operating in the same industry and the rest of the control variables used in Model 6-2 (Laeven and Levine, 2008; Mishra, 2011; Paligorova and Xu, 2012). *IV\_MLS5*, *IV\_Number5*, and *IV\_hdis5* are justified because each block's strategic investment policy is unlikely to affect the ownership structure of firms operating in the same industry (Mishra, 2011).

As Table 6-8 shows, the results indicate positive and significant coefficients of all three instruments. The tests support the use of these instruments. The second-stage regresses *Fees* against the fitted value of the instrument from the first-stage regression (*MLS5\_fitted*, *Number5\_fitted*, and *Hdis5\_fitted*). The results show a significant positive relationship between the presence and number of MLS and *Fees*, providing additional support to **H5** and **H6**.

**Table 6-8 The effect of MLS on audit fees (Fees) using 2SLS.**

VARIABLES	(1) Fees	(2) Fees	(3) Fees
Panel A: Second-stage regressions			
MLS5_fitted	1.1401*** (0.3334)		
Number5_fitted		0.2970*** (0.0688)	
Hdis5_fitted			-0.0179 (0.0167)
Size	0.4550*** (0.0162)	0.4510*** (0.0150)	0.4873*** (0.0106)
Leve	0.2587** (0.1018)	0.2073** (0.0875)	0.1564* (0.0819)
Int-sale	0.2502*** (0.0399)	0.2351*** (0.0375)	0.2463*** (0.0348)
Inv-rec	0.3536*** (0.1003)	0.4085*** (0.0954)	0.3761*** (0.0828)
CRatio	-0.0310*** (0.0071)	-0.0391*** (0.0073)	-0.0330*** (0.0061)
IFRS	0.6345*** (0.1506)	0.6184*** (0.1392)	0.4949** (0.2175)
Loss	0.2327*** (0.0354)	0.2420*** (0.0333)	0.2762*** (0.0301)
Constant	-2.3622*** (0.2755)	-2.2533*** (0.2254)	-1.4941*** (0.2620)
Observations	1,306	1,306	1,306
R-squared	0.4936	0.5321	0.6702
Panel B: First-stage regressions			
IV_MLS5	0.8830*** (0.1637)		
IV_Number5		0.9792*** (0.1246)	
IV_Hdis5			0.4311*** (0.1355)
Shea's partial R <sup>2</sup>	.03016	.0469	.02265
F-test of excluded instruments	29.08***	61.75***	10.12***
Kleibergen-Paap LM statistic:	27.07	52.83	9.89
Underidentification test	(p < 0.01)	(p < 0.01)	(p < 0.01)

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the results using 2SLS. Definitions of the variables are outlined in Table 6-5

In addition, the chapter repeats the same technique used in the previous chapter regarding the PSM procedure. In this chapter, the PSM subset includes 1306 firm-year observations in which 1183 observations with MLS. Table 6-9 shows a significant negative relationship between *Hdis5* and *Fees*, providing additional support to **H7**.

**Table 6-9 The effect of MLS on audit fees (Fees) using PSM**

VARIABLES	(1) Fees	(2) Fees	(3) Fees
MLS5	0.0538 (0.0408)		
Number5		0.0152 (0.0119)	
Hdis5			-0.0075*** (0.0024)
Size	0.4861*** (0.0104)	0.4858*** (0.0104)	0.4875*** (0.0103)
Leve	0.1478** (0.0718)	0.1457** (0.0717)	0.1483** (0.0714)
Int-sale	0.2267*** (0.0301)	0.2261*** (0.0301)	0.2343*** (0.0301)
Inv-rec	0.3648*** (0.0776)	0.3676*** (0.0776)	0.3699*** (0.0773)
CRatio	-0.0320*** (0.0053)	-0.0325*** (0.0053)	-0.0325*** (0.0053)
IFRS	0.6980*** (0.0967)	0.6969*** (0.0968)	0.6141*** (0.1004)
Loss	0.2638*** (0.0270)	0.2641*** (0.0270)	0.2699*** (0.0269)
Constant	-1.7542*** (0.1493)	-1.7512*** (0.1491)	-1.6270*** (0.1505)
Observations	1,306	1,306	1,306
R-squared	0.6727	0.6727	0.6747
Adjusted R <sup>2</sup>	0.6707	0.6707	0.6727

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the results using PSM. Definitions of the variables are outlined in Table 6-5

### **6.6.3. Additional control variable**

The results provided in the main analysis indicate that auditors consider *MLS* as a potential source of risk, as evidenced by the positive impact between *MLS5* and *Fees*. This section aims to rerun the main model to include the effect of the audit firm size on the quality of the analysis. This section includes *BIG4*, a dummy that equals one if the firm uses one of the Big 4 auditors and 0 otherwise, to understand its effect on the overall results. As outlined by Francis 1984, Big 4 firms are associated with high-quality auditing, which translates into an increase ( Big 4 premium) in the audit fees compared to other audit firms. Table 6-10 confirms that *Fees* is positively associated with Big4 across all specifications. Table 6-10 assures that the results still hold after controlling for Big 4 firms.

**Table 6-10 The effect of MLS on audit fees with an additional control variable ( Big4)**

VARIABLES	(1) Fees	(2) Fees	(3) Fees
Panel A: Second-stage regressions			
MLS5_fitted	0.9593*** (0.3039)		
Number5_fitted		0.2732*** (0.0658)	
Hdis5_fitted			-0.0300* (0.0167)
Size	0.4472*** (0.0173)	0.4448*** (0.0157)	0.4821*** (0.0115)
Leve	0.3439*** (0.0994)	0.3085*** (0.0885)	0.2565*** (0.0842)
Int-sale	0.2221*** (0.0401)	0.2043*** (0.0395)	0.2382*** (0.0365)
Inv-rec	0.2569** (0.1019)	0.3124*** (0.0969)	0.3225*** (0.0875)
CRatio	-0.0362*** (0.0072)	-0.0436*** (0.0077)	-0.0389*** (0.0069)
IFRS	0.5865*** (0.1443)	0.5635*** (0.1401)	0.2974 (0.2363)
Loss	0.2047*** (0.0356)	0.2096*** (0.0343)	0.2587*** (0.0326)
Big4	0.0958*** (0.0316)	0.0698** (0.0302)	0.0503* (0.0272)
Constant	-2.0871*** (0.2413)	-2.0564*** (0.2175)	-1.2296*** (0.2964)
Observations	1,184	1,184	1,184
R-squared	0.5771	0.5857	0.6745
Panel B: First-stage regressions			
IV_MLS5	0.9194*** (0.1706)		
IV_Number5		1.0172*** (0.1305)	
IV_Hdis5			0.5385*** (0.1555)
Shea's partial R <sup>2</sup>	.03432	.05175	.01029
F-test of excluded instruments	29.03***	60.77***	12.00***
Kleibergen-Paap LM statistic:	27.127	51.460	11.620
Underidentification test	(p < 0.01)	(p < 0.01)	(p < 0.01)

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the main analysis results by adding the Big4 effect. Big4 is a dummy that equals one if the firm uses one of the Big 4 auditors and 0 otherwise. The definitions of all variables are the same as in Table 6-5.

## 6.7 Conclusion

This chapter provided empirical evidence on the effect of MLS beyond the LCS on audit fees. The chapter is motivated by the argument stated in the International Standard on Auditing (ISA) 315, which asserts the need for auditors to assess the risks of financial misreporting. In this regard, (ISA) 315 affirms that auditors must understand the nature of the audited firm - including its ownership structure - and assess the associated risk with its nature. Such an effort has been documented in many studies which assert that auditing is a means of mitigating agency costs by assuring that information asymmetry is reduced, thus enhancing the quality of financial statements.

Using a sample of AIM firms, the findings support that auditors view MLS as a potential risk to their firms due to the coalition formation effect. More specifically, auditors expect MLS to fail in limiting the LCS's probability of diverting corporate resources to the detriment of non-controlling shareholders. By doing so, MLS negate their monitoring effect and choose to collude with the LCS.

Moreover, Edmans and Holderness (2017) assert the importance of the type-dimension of MLS. In this regard, this study presented evidence of the homogeneity of MLS. It confirmed that the effect of MLS presence still holds when the first two largest shareholders are from the same type and when the first three largest shareholders are from the same type. Finally, this study assured that when the first two largest shareholders are from a family type, the effect is more pronounced than other types of large shareholders.

## **Chapter 7 : The Effect of Multiple Large Shareholders on Corporate Debt Maturity**

### **7.1 Introduction**

Firms seek to secure external funds through two main sources: borrowing and issuing equity capital. Regarding the former, firms need to balance short-term and long-term debt since a mismatch between the two options may lead to a negative net present cash flow. In this vein, three theories have emerged based on corporate debt maturity. First, Ivan and Ravid (1985) assert that the optimal choice depends on the term structure of interest rate and tax shield. However, Eugene (1990) argues that debt choices depend on the firm's attributes, such as information, monitoring and cost of the contract. Mark (1986) claims that firms with high-quality attributes prefer short-term debt to publicise their good quality. Finally, Myers (1977) suggests that firms may choose short-term debt to mitigate the underinvestment problem. In this respect, the underinvestment problem is a type of agency conflict between shareholders and debt holders in which shareholders may choose to ignore valuable investments to restrain debt holders from attaining private benefits of control. Both Eugene (1990) and Myers (1977) views outline that information asymmetry and contracting costs are important factors in determining debt choices.

Based on these theories, scholars have examined the role of information asymmetry and its role in the two choices of debt maturity. More specifically, corporate finance studies have focused on the role of CG -as a means to mitigate information asymmetry- in determining debt maturity choices. For example, Sudip et al. (2005) and Jiraporn and Kitsabunnarat (2007) examine the relationship between debt maturity choices, managerial ownership, and the strength of shareholder rights. Both studies document an inverse relationship between managerial stock ownership, the strength of shareholder rights, and corporate debt maturity. Moreover, Harford et al. (2008) claim that debt can be used as a mechanism to discipline managers. In this regard, BoD uses more debt and in particular short-term debt, as an extra monitoring mechanism. Besides, Brockman et al. (2010) support the view that debt maturity choices restrain management from taking high-risk projects, ultimately affecting the management compensation. All these studies provide an important investigation of the role of debt choices in the US market in which the dominant agency conflict is between the management and the LCS (i.e., principal-agent conflict).

However, many studies have suggested that the principal-principal conflict is dominant in many markets worldwide. For example, Claessens et al. (2000), Dyck and Zingales (2004), Faccio and Lang (2002), and La Porta et al. (1999) document the dominant existence of principal-principal conflict in most markets around the globe. In this vein, many studies have documented the presence of MLS at the 10% threshold in many markets. For example, Claessens et al. (2000) report that 32.2% of East Asian firms have at least two large shareholders. Also, Faccio and Lang (2002) document that 46% of Western European firms have MLS. Laeven and Levine (2008) support the same view and report that 34% of European firms have MLS. Thus, the focus of new studies should examine the role of MLS on firm-level attributes and outcomes. Based on this argument, scholars have considered MLS monitoring on firms' specific attributes such as firm valuation (Attig et al., 2009; Laeven and Levine, 2008; Maury and Pajuste, 2005), cost of equity capital (Attig et al., 2008), and dividend rates (Faccio et al., 2001). Nonetheless, the link between the monitoring role of MLS and debt maturity is still insufficiently examined.

Ben-Nasr et al. (2015) tackle this gap and examine the role of MLS on corporate debt maturity in French firms. Their study is considered the first to investigate the role of MLS monitoring on debt maturity. In this regard, they argue that firms with an LCS and MLS behind her/him suffer from principal-principal conflict in which the LCS aims to extract private benefits of control; thus, she/he prefers less monitoring from creditors. Therefore, the LCS will impose his/her power to choose longer debt maturity, thus lowering the level of monitoring on him/her. However, MLS can restrain such choices for longer debt through the voice and exit methods.

This chapter follows the argument provided by Ben-Nasr et al. (2015) by considering the possibility that MLS can be an internal monitoring mechanism. However, the study also considers the opposite role in which MLS can harm their firms. Theoretically, MLS can play two contrasting roles: monitoring and expropriation. Therefore, this study extends Ben-Nasr et al. (2015) by considering that MLS form a coalition with the LCS to divert corporate resources. Based on this formation, MLS will prefer less monitoring by external bodies, leading to lower acceptance of short debt maturity. Second, the study extends Ben-Nasr et al. (2015) by considering AIM, a market for SMEs, to answer the following questions:

Q5: What is the effect of the presence, number, and relative power of MLS on corporate debt maturity in AIM?

Q6: What is the effect of MLS type-dimension on the relationship between the presence of MLS and corporate debt maturity in AIM?

## **7.2 Hypotheses development**

As established in the literature review chapter, a new type of conflict called the principal-principal conflict has attracted considerable attention among corporate governance scholars. Firms with an LCS and non-controlling shareholders are evident in many studies (Claessens et al., 2000; Fan and Wong, 2002). With more recent studies establishing the trend toward more concentrated ownership, many studies have considered MLS and their control role on their firms (Attig et al., 2009; Attig et al., 2013; Boubaker et al., 2016; Cai et al., 2016). This section aims to build the argument of the two conflicting roles that MLS can play, namely the advisory-monitoring role and the adverse role. Based on each role, the LCS and MLS can interact and choose a specific debt maturity choice that secures their private benefits of control. As suggested by Edmans and Holderness (2017), the mere presence or actual voting percentage cannot be the only valid proxy to evaluate the effect of MLS on their firms. Other proxies - such as the number as in Jallow et al. (2012) and the relative power of MLS as in Laeven and Levine (2008)- are better used to evaluate such effect. Thus, the first subsection uses the presence, number, and relative power of MLS. The second subsection considers the type of MLS as an extra dimension that is added to the presence of MLS to provide more related results.

### **7.2.1. The presence, number, relative size and type of MLS and corporate debt maturity**

In a concentrated ownership structure, the LCS seeks to secure control rights to access private benefits of control (Bebchuk et al., 2000; Bennedsen and Nielsen, 2010; Claessens et al., 2000; Shleifer and Vishny, 1997). Usually, LCSs refuse monitoring which influences debt maturity choices (Demirguc-Kunt and Maksimovic, 1999). Short-term debt is often considered a burden to the LCS because lenders can monitor the LCS via frequent refinancing and renegotiations of contract terms. Rajan and Winton (1995) and Stulz (2001) advocate that short debt can effectively monitor insiders by demanding frequent repayment. Also, short-maturity debt can be used to mitigate the agency conflict between managers and shareholders because lenders use mechanisms such as underwriters and rating agencies to evaluate the firm's quality (Sudip et al., 2005). Lin et al. (2013) agree with this and find that higher control-ownership wedge leads to long-term debt.

Additionally, Jiraporn and Kitsabunnarat (2007) establish that firms with weak shareholder rights desire long-term debt to avoid extra external monitoring. Finally, Ortiz-Molina and Penas María (2008) advocate that short debt can mitigate information asymmetry in small business lending. Therefore, LCSs prefer longer debt over shorter debt to avoid extra monitoring by lenders.

However, LCSs do not have full power over the choice of debt. MLS as powerful insiders affect debt maturity choices. In this regard, MLS power is attained through many channels using two methods, namely voice (i.e., activism) and exit. For example, Mishra (2011) outlines that MLS may have access to board voting, thus affecting the debt choices decision. Also, Becht et al. (2010) outline that MLS can use private communication to affect certain targeted performance. Moreover, MLS can use private information- as insiders- to affect the share price by threatening the LCS to drive the price to fundamental values (Admati and Pfleiderer, 2009; Edmans, 2009). However, MLS can effectively exercise these powers based on their type because each type has different beliefs, skills, or preferences (Becker et al., 2011; Cronqvist and Fahlenbrach, 2009).

Nonetheless, MLS use their power to secure their private benefits of control. Thus, on the one hand, MLS can be considered harmful to the firm upon the existence of certain circumstances. MLS may choose to collude with an LCS to control corporate policy and eventually affect the firm's strategy (Bennedsen and Wolfenzon, 2000). By doing so, they will have the ability to expropriate other shareholders and share the private benefits of control (Zwiebel, 1995). Also, MLS can choose to collude to access important information that is held by the LCS (Cheng et al., 2013). As a result of this coalition formation effect, MLS bring an entrenchment effect, leading them to disuse their channels of monitoring. Recent empirical evidence suggests that the two forms of coalition formation exist. The first is among MLS -as documented by the "wolf-pack" theory- which supports that even with a higher number of MLS, they can still form a coalition and impose monitoring (Brav et al., 2016). The other form of the coalition is between the LCS and MLS, which has been documented in the US (Wang, 2017), China (Cai et al., 2016), and Norway (Hope et al., 2012).

Based on the above discussion, it is not clear- a priori – whether MLS will choose longer corporate debt maturity based on the entrenchment effect or short corporate debt maturity based on the efficient-monitoring effect. However, this study supports the entrenchment effect given

the features of AIM and the previous evidence in the two empirical chapters; hence, this chapter proposes the following hypothesis:

***H<sub>9</sub>: MLS presence is associated with higher long debt maturity in AIM.***

Yet, the mere presence of MLS is one of the proxies used to explain MLS monitoring. The tendency toward more expropriation can be explained better using other proxies such as MLS number and the relative power of MLS size. In other words, MLS number and the relative power of MLS size can explain how MLS secure their private benefits of control. MLS intervention using the voice method is affected by the number of MLS (Andrew, 1993; Edmans and Manso, 2011; Kahn and Winton, 1998; Noe, 2002). In essence, the number of MLS affects the strength of voice by impacting block size. In other words, if the total shares are divided among a higher number of MLS, voice intervention is weakened. However, this assumption depends on the concept that each MLS works alone. Brav et al. (2016) support this notion. Based on a theory of "wolf-pack" activism, they find that MLS can coordinate to engage in intervention, as opposed to forming a coalition with the LCS (Bennedson and Wolfenzon (2000). Thus, MLS have two options to secure private benefits of control. The first to form a coalition among each other and impose monitoring, thus challenging the LCS. On the other hand, MLS can align their decisions with the LCS, thus refusing extra monitoring from outsiders.

Empirically, there is no consensus on what situation will prevail. For example, recent studies show that a higher number of MLS is associated with a lower implied cost of equity (Attig et al., 2008), higher performance (Attig et al., 2009; Maury and Pajuste, 2005), and lower auditing fees ((Ali et al., 2020). However, Cai et al. (2016) propose that higher numbers of MLS harm minority shareholders and financing decisions. Therefore, it is not clear- a priori – how the number of MLS will affect corporate debt maturity. However, the evidence from the first two empirical chapters suggests that a higher number of MLS is associated with lower performance and higher audit fees. Therefore, this study proposes the following hypothesis:

***H<sub>10</sub>: MLS number is associated with higher long debt maturity in AIM.***

Finally, MLS power is well explained using the relative size of each block. In this regard, each MLS is considered a powerful player in a game of decision making. Therefore, the relative size can be used to calculate certain contestability measures, thus, explaining the outcomes of control contestability. Maury and Pajuste (2005) advocate this claim. They assure

that the relative size of MLS can affect the coalition formation among the MLS or with the LCS. In one scenario, if the relative power is concentrated in the hand of the LCS and few numbers of MLS, MLS and the LCS are more likely to form a controlling coalition. In this scenario, the contestability is low among the coalition members, leading the controlling coalition to choose a longer debt choice to avoid lenders monitoring. Also, If the blocks are equally distributed among MLS and LCS, the possibility of forming a coalition is high. Based on this argument, this study proposes that:

***H<sub>11</sub>: More comparable voting rights between large shareholders increases corporate debt maturity in AIM.***

### **7.2.2. The type of multiple large shareholders and corporate debt maturity**

MLS power can be explained using the actual voting percentage or relative power (Attig et al., 2006; Laeven and Levine, 2007; Maury and Pajuste, 2005). In the same line, the type of MLS can add more interpretation to the role of MLS. In this regard, some studies have accompanied the presence of MLS with their type. However, most of these studies have focused on family holding (Ali et al., 2020; Fattoum-Guedri et al., 2018; Maury, 2006) and neglected other MLS types that can affect the interpretation of the results. This is related to the aspect that family firms are more prone to exercise power due to their ability to use both voice and exit methods. In this regard, Edmans and Holderness (2017) outline that "Blockholders are heterogeneous: they include institutions (e.g. hedge funds, mutual funds, and pension funds), individuals, and other corporations. Each has its own determinants, incentives, and consequences; these considerations are likely to vary by country. Most research, however, treats all block holders as homogenous". Therefore, adding the type dimension and considering shareholders' homogeneity based on specified variables is important when examining MLS.

In this regard, a few empirical research considers MLS homogeneity among each other or with the LCS (Ducassy and Guyot, 2017; Laeven and Levine, 2008). These studies argue that MLS presence is not solely sufficient to secure additional control over the managers or the LCS. In essence, MLS power is less pronounced when they are of the same type as the LCS. On the contrary, power is executed when MLS are of a different type. Also, Maury and Pajuste (2005) and Jara-Bertin et al. (2008) advocate this point and show that coalitions are less likely among heterogeneous shareholders. For example, coalitions between family holdings and institutional holdings are difficult, due to high opportunity costs. In this regard, the opportunity costs for family holding are high due to reputation damage. At the same time, the opportunity

cost for institutional holding is high due to regulatory supervision and sanctions. In contrast, shareholders of the same type are more likely to work together because they share common goals (Bennedsen and Wolfenzon, 2000; Laeven and Levine, 2007). Therefore, this study proposes the following hypothesis:

***H<sub>12</sub>: MLS homogeneity increases the intensity of the relationship between MLS presence and corporate debt maturity in AIM.***

### 7.3 Model specification

This section builds more on the data and methodology chapter. As previously applied in the two empirical chapters, the first step includes identifying the number of lags. The second step includes specifying the following dynamic model:

#### Model 7-1

$$Debt1_{i,t} = \alpha_t + \alpha_i + Debt1_{i,t-1} + \beta_1 MLSVAR_{i,t} + \beta_2 Size_{i,t} + \beta_3 Leve_{i,t} + \beta_4 ROAsd_{i,t} + \beta_5 ANBE_{i,t} + \beta_6 AMA_{i,t} + \beta_7 MTB_{i,t} + \varepsilon_{i,t}$$

Consistent with Zheng et al. (2012), *Debt1* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *MLSVAR* is one of the ownership variables (i.e., *MLS5*, *Number5*, and *Hdis5*). *MLS5* is a dummy variable that tests the presence of MLS at the 5% threshold. As established in **H<sub>9</sub>**, it is assumed that the LCS and MLS will collude and refuse extra monitoring by lenders, leading to longer debt maturity. Thus, *MLS5* is expected to have a positive relationship with *Debt1*. *Number5* equals the number of MLS behind the largest shareholder up to the fourth shareholder at the 5% threshold<sup>32</sup>. As established in the hypotheses section, this study assumes a positive relationship between *Number5* and *Ratio*. *Hdis5* is the Herfindahl dispersion measure defined as the sum of squares of the differences for each shareholder. High dispersion among the LCS and first MLS indicates that shares are not equally distributed, making the wedge between the LCS and first MLS high. When the wedge is relatively high, the coalition formation process is likely to happen. Thus, lower values of *Hdis5* will lead to longer debt choices. In other words, *Hdis5* is expected to affect *Debt1* negatively.

Regarding the type dimension, the study employs the following model:

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<sup>32</sup> This study considers four MLS behind the LCS to make sure that no shareholder at the 5% threshold is excluded from the analysis.

#### Model 7-2

$$\begin{aligned} Debt1_{i,t} = & \alpha_t + \alpha_i + Debt1_{i,t-1} + \beta_1 MLS5_{i,t} * Type_{i,t} + \beta_2 Size_{i,t} + \beta_3 Leve_{i,t} \\ & + \beta_4 ROAsd_{i,t} + \beta_5 ANBE_{i,t} + \beta_6 AMA_{i,t} + \beta_7 MTB_{i,t} + \varepsilon_{i,t} \end{aligned}$$

In this regard, Model 3-3 tries to combine the general MLS effect and the type effect on corporate debt maturity. In this regard, the model focus on MLS homogeneity between the LCS and MLS. *Type* represents one the homogeneity variables (*Same12* and *Same123*). As established in *H12*, this study assumes a higher intensity of the association between *MLS5* and *Debt1* when homogeneity increases.

#### 7.4 Descriptive statistics and correlations

Table 7-1 reports summary statistics for the variables used in the main analysis *Debt1* is 33.6% on average with a standard deviation of 0.257. In addition, *Debt2* is 66.3% on average compared to 53.74% as in Ben-Nasr et al. (2015). Table 7-2 and Table 7-3 present the VIF tests and the Pairwise correlations, respectively. Not surprisingly, the correlation coefficients between MLSVAR are relatively high as they are different proxies for MLS.

**Table 7-1 Summary statistics: corporate debt maturity and related control variables.**

	N	Mean	max	min	Std. Dev.	p25	Median	p75
Debt1	4195	.336	0.940	.002	.257	.118	.283	.517
Debt2	2734	.663	1.000	.003	.306	.435	.744	.935
Size	5655	9.902	13.562	5.351	1.67	8.78	9.955	11.125
Leve	4268	.172	1.378	.001	.219	.035	.101	.231
ROA-sd	5143	.694	147.291	0	4.213	.115	.214	.489
ABNE	4723	.015	1.423	-1.165	.277	-.037	.007	.052
AMA	3243	18.884	321.454	.143	60.756	.616	1.618	4.888
MTB	4915	3.396	43.349	.185	5.706	.879	1.716	3.444

This table shows the descriptive statistics for the variables used in the main empirical analysis. *Debt1* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *Debt2* is the ratio of long term debt divided by total debt. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *ROA-sd* is the standard deviation of the firm's return on assets over the previous five years. return on assets is calculated using the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *ANBE* is the abnormal earnings estimated as the change in EBITDA from year t to year t + 1 divided by the market value of equity in year t. *AMA* is the weighted average of the maturities of current and long-term assets. *MTB* is the market-to-book ratio. *Ratio*, *Hdis5*, *Size*, *Leve*, *STD\_ROA*, *ABNE*, and *MTB* are winsorised at the 1st and 99th percentiles *AMA* is winsorised at the 3rd and 97th percentiles

**Table 7-2 Variance inflation factor (empirical chapter three).**

	VIF	1/VIF	VIF	1/VIF	VIF	1/VIF
MLS5	1.027	.974				
Number5			1.025	.976		
Hdis5					1.008	.992
MTB	1.082	.924	1.081	.925	1.081	.925
Size	1.098	.911	1.101	.908	1.079	.926
Leve	1.047	.955	1.042	.96	1.042	.959
ROA-sd	1.01	.99	1.011	.989	1.01	.99
AMA	1.014	.987	1.013	.987	1.016	.985
ABNE	1.017	.983	1.016	.984	1.015	.986
Mean VIF	1.042	.	1.041	.	1.036	.

This table shows Variance inflation factor for each independent variable used in the main empirical analysis.

**Table 7-3 Pairwise correlations MLS and corporate debt maturity.**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Debt1	1.000												
(2) Debt2	0.598 (0.000)	1.000											
(3) MLS5	0.001 (0.977)	0.015 (0.501)	1.000										
(4) Number5	0.010 (0.554)	0.041 (0.058)	0.769 (0.000)	1.000									
(5) Hdis5	0.009 (0.602)	0.022 (0.312)	-0.274 (0.000)	-0.352 (0.000)	1.000								
(6) Same12	0.041 (0.014)	0.045 (0.028)	-0.021 (0.157)	-0.035 (0.018)	0.025 (0.098)	1.000							
(7) Same123	0.039 (0.021)	0.023 (0.273)	0.128 (0.000)	0.072 (0.000)	-0.033 (0.028)	0.568 (0.000)	1.000						
(8) Size	0.175 (0.000)	0.135 (0.000)	0.091 (0.000)	0.146 (0.000)	-0.023 (0.124)	-0.037 (0.010)	-0.034 (0.018)	1.000					
(9) Leve	0.598 (0.000)	0.349 (0.000)	-0.049 (0.004)	-0.049 (0.004)	0.104 (0.000)	0.025 (0.132)	0.018 (0.273)	-0.037 (0.015)	1.000				
(10) ROA-sd	0.020 (0.231)	0.031 (0.128)	-0.006 (0.704)	-0.025 (0.113)	0.009 (0.556)	0.026 (0.090)	0.017 (0.247)	-0.177 (0.000)	0.154 (0.000)	1.000			
(11) ABNE	0.002 (0.913)	-0.014 (0.513)	0.012 (0.474)	0.008 (0.629)	-0.006 (0.734)	0.014 (0.361)	0.000 (0.993)	0.019 (0.198)	0.021 (0.201)	-0.037 (0.016)	1.000		
(12) AMA	0.003 (0.877)	0.014 (0.544)	0.016 (0.425)	0.016 (0.408)	-0.030 (0.129)	0.027 (0.155)	0.033 (0.077)	0.052 (0.003)	-0.015 (0.438)	0.050 (0.007)	0.009 (0.639)	1.000	
(13) MTB	-0.072 (0.000)	0.030 (0.152)	-0.004 (0.821)	-0.008 (0.624)	0.002 (0.893)	0.001 (0.964)	-0.006 (0.706)	-0.235 (0.000)	0.100 (0.000)	0.079 (0.000)	-0.011 (0.453)	0.028 (0.134)	1.000

This table shows the pairwise correlations for the variables used in the main empirical analysis. *Ratio* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *MLS5* is a dummy variable that equals 1 if the firm has two MLS at the 5% threshold, and 0 otherwise. *Number5* is the number of large shareholders behind the largest up to fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences for each shareholder. *Same12* is a dummy variable that equals one if the LCS and the first MLS are from the same type and zero otherwise. *Same123* is a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *ROA-sd* is the standard deviation of the firm's return on assets over the previous five years. return on assets is calculated using the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *ABNE* is the abnormal earnings estimated as the change in EBITDA from year t to year t + 1 divided by the market value of equity in year t. *AMA* is the weighted average of the maturities of current and long-term assets. *MTB* is the market-to-book ratio. *Ratio*, *Hdis5*, *Size*, *Leve*, *STD\_ROA*, *ABNE*, and *MTB* are winsorised at the 1st and 99th percentiles *AMA* is winsorised at the 3rd and 97th percentiles

## 7.5 Results and discussion

This section exhibits the relationship between MLS and corporate debt maturity. The first subsection provides pooled OLS estimations to justify the number of appropriate historical dependent variables. Once the relationship between corporate debt maturity variables (current and historical value) is confirmed, the main analysis can be conducted using the two-step GMM.

### 7.5.1. Testing number of lags

Table 7-4 reports the results using pooled OLS regression. Table 7-4 (Columns 1 and 2) show the effect of the previous four historical *Debt1* on the current *Debt1*. In addition, Table 7-4 (Columns 3 and 4) show the effect of the previous four historical *Debt2* on the current *Debt2*. Table 7-4 (Columns 1 and 2) confirm that *Debt1* is associated with previous values up to the third past year. Therefore, one can use the three-year lag to include in the GMM specifications. Moreover, in Table 7-4 (Columns 3 and 4), one can note that up to four-year historical performance is statistically significant with current *Debt2*. Therefore, using these historical values as an endogenous instrument in the GMM specifications from lag four is appropriate.

**Table 7-4 Lags on corporate debt maturity.**

	(1)	(2)	(3)	(4)
	Debt1	Debt1	Debt2	Debt2
Debt maturity $t-1$	.3399*** (.0448)		.3314*** (.0503)	
Debt maturity $t-2$	.1632*** (.0491)		.1303*** (.0462)	
Debt maturity $t-3$	.0931* (.0497)	.3053*** (.0409)	-.0438 (.0434)	.0896** (.0443)
Debt maturity $t-4$	-.0348 (.0364)	.0515 (.0404)	.0937** (.0438)	.1668*** (.0429)
Size	.025*** (.0034)	.0347*** (.0035)	.0251*** (.0078)	.036*** (.008)
Leve	.4681*** (.045)	.6505*** (.0465)	.4701*** (.0605)	.5787*** (.0571)
STD_ROA	-.0218** (.0098)	-.028** (.0129)	-.0367*** (.0089)	-.0468*** (.011)
ABNE	-.0156 (.0177)	-.0304 (.0189)	-.0695* (.0367)	-.0858** (.0421)
AMA	0 (.0001)	0 (.0001)	.0001 (.0001)	.0001 (.0001)
MTB	-.0023*** (.0007)	-.0028*** (.0009)	.0011 (.0019)	.0011 (.0021)
_cons	-.1544*** (.0348)	-.2086*** (.0377)	-.1142 (.0852)	-.0804 (.0897)
Observations	1114	1152	571	627
R-squared	.72	.6515	.473	.3535
Year dummies	yes	yes	yes	yes
industry dummies	yes	yes	yes	yes

Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ . This table shows the number of lags used in the main analysis. *Debt1* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of large shareholders behind the largest up to fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences for each shareholder. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *ROA-sd* is the standard deviation of the firm's return on assets over the previous five years. Return on assets is calculated using the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *ANBE* is the abnormal earnings estimated as the change in EBITDA from year  $t$  to year  $t + 1$  divided by the market value of equity in year  $t$ . *AMA* is the weighted average of the maturities of current and long-term assets. *MTB* is the market-to-book ratio. *Ratio*, *Hdis5*, *Size*, *Leve*, *STD\_ROA*, *ABNE*, and *MTB* are winsorised at the 1st and 99th percentiles *AMA* is winsorised at the 3rd and 97th percentiles.

## 7.5.2. Main results

Table 7-5 exhibits the results from the two-step system GMM regressions of the debt maturity variable (*Ratio*) against each *MLSVAR* and the control variables, as per Model 7-1. Table 7-5 shows the results from three regressions based on the version of the *MLSVAR* (i.e., *MLS5*, *Number5*, and *hdis5*). Several validity tests of the GMM estimation are reported in the

last six rows of Table 7-5. The results in Table 7-5 (Column 1) indicate that the *MLS5* positively impacts *Debt1* at the 10% significant level. This means that everything else being equal, an increase in *MLS5* induces a 0.543% increase in *Debt1* in the short run. Finally, Table 7-5 (Column 3) shows that *Hdis5* is associated with a low *Debt1* at the 1% significant level in the short run, *ceteris paribus*.

The results of the first previous two chapters outline that MLS are linked with low firm performance and high audit fees. The previous two chapters confirm that MLS use their power to form a coalition with the LCS to divert corporate resources. Table 7-5 enriches the argument of the first two chapters and supports the entrenchment hypothesis in the AIM firms. In this chapter, the results are in line with the argument provided in *H<sub>9</sub>* and *H<sub>11</sub>*. Also, the results are consistent with many theoretical models, which establish that large controlling shareholders are more willing to consume private benefits of control when their blocks are equally distributed (Bloch and Hege, 2003; Kahn and Winton, 1998; Zwiebel, 1995).

Moreover, coalition formation is documented in many empirical studies. For example, Maury and Pajuste (2005) and Faccio et al. (2001) support that the LCS and MLS choose to collude to consume private benefits of control. Upon the documentation of such a coalition, MLS -as self-interested controlling owners- tend to collude with LCS to expropriate minority shareholders. Such an expropriation increases agency conflicts. Therefore, based on the main premise of this chapter, self-interested controlling owners prefer long debt maturity to avoid extra monitoring by debt holders.

Regarding the control variables, Table 7-5 shows -across all the specifications- that firms with large sizes prefer a long debt maturity structure. The results indicate that *Size* coefficient is positive and statistically significant at the 1% level in the short run, *ceteris paribus*. In this regard, Douglas (1991) outlines that large firms have a great reputational credit quality which enables these firms to obtain longer debt maturity compared to small firms.

Moreover, the results show that *Leve* is positive and statistically significant at the 1% level in the short run, *ceteris paribus*. This is consistent with the argument that firms with higher leverage tend to choose longer debt maturity periods (Dang, 2011; Douglas, 1991; Johnson, 2003).

**Table 7-5 The effect of MLS on corporate debt maturity.**

VARIABLES	(1) Debt1	(2) Debt1	(3) Debt1
Debt1 <sub>t-1</sub>	0.1694*** (0.0074)	0.1180*** (0.0105)	0.1599*** (0.0096)
MLS5	0.0054* (0.0030)		
Number5		0.0029 (0.0029)	
Hdis5			-0.0028*** (0.0003)
Size	0.0703*** (0.0024)	0.0706*** (0.0034)	0.0756*** (0.0035)
Leve	0.9041*** (0.0111)	0.9163*** (0.0134)	0.8628*** (0.0126)
STD_ROA	0.0173*** (0.0036)	0.0199*** (0.0048)	0.0182*** (0.0048)
ABNE	-0.0240*** (0.0033)	-0.0240*** (0.0037)	-0.0199*** (0.0035)
AMA	0.0002*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)
MTB	-0.0008*** (0.0001)	-0.0009*** (0.0002)	-0.0006*** (0.0002)
Constant	-0.6501*** (0.0274)	-0.6512*** (0.0411)	-0.6890*** (0.0394)
Observations	1,612	1,612	1,612
Number of Groups	315	315	315
Number of Instruments	224	191	199
AR(1)	1.91e-05	6.20e-05	1.32e-05
AR(2)	0.225	0.318	0.197
Hansen	0.484	0.471	0.140

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the main analysis for the variables used in the main empirical analysis. *Debt1* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of large shareholders behind the largest up to fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences for each shareholder. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *ROA-sd* is the standard deviation of the firm's return on assets over the previous five years. Return on assets is calculated using the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *ANBE* is the abnormal earnings estimated as the change in EBITDA from year t to year t + 1 divided by the market value of equity in year t. *AMA* is the weighted average of the maturities of current and long-term assets. *MTB* is the market-to-book ratio. *Ratio*, *Hdis5*, *Size*, *Leve*, *STD\_ROA*, *ABNE*, and *MTB* are winsorised at the 1st and 99th percentiles *AMA* is winsorised at the 3rd and 97th percentiles.

### 7.5.3. Results by the type-dimension

Table 7-6 extends the analysis and links it to shareholders' homogeneity. Table 7-6 shows the homogeneity impact of the LCS and first MLS on the results. Table 7-6 (Columns 1 and 2) introduces an interaction term between *MLS5* and *Same12*, *Same123*, respectively. *Same12* and *Same123* are two dummy variables representing the homogeneity between the LCS and first MLS and the LCS and the first two MLS, respectively. Table 7-6 (Column 2) reveals that the term of interaction between *MLS5* and *Same123* has no impact on the results. However, (Column 1) shows that when the first two shareholders are of the same type, they are keen to choose longer debt maturity.

The results support the argument provided in section 7.2.2. In other words, when shareholders have the same interest, their presence is associated with longer debt maturity. This means that MLS have no fear of losing power in favour of the LCS, as the LCS will act the same way as they would. These results confirm  $H_{12}$  which indicates that the relationship between MLS and corporate debt maturity depends on the type's homogeneity between the LCS and MLS.

**Table 7-6 The effect of MLS homogeneity on corporate debt maturity.**

VARIABLES	(1) Debt1	(2) Debt1
Debt1 <sub>t-1</sub>	0.1321*** (0.0080)	0.0870*** (0.0260)
MLS5* Same12	0.0398*** (0.0145)	
MLS5* Same123		-0.3760 (0.5553)
Size	0.0726*** (0.0029)	0.0729*** (0.0057)
Leve	0.9194*** (0.0124)	0.9781*** (0.0262)
STD_ROA	0.0274*** (0.0041)	0.0265*** (0.0075)
ABNE	-0.0294*** (0.0030)	-0.0178** (0.0079)
AMA	0.0001*** (0.0000)	0.0001* (0.0000)
MTB	-0.0009*** (0.0002)	-0.0006 (0.0004)
Constant	-0.6680*** (0.0317)	-0.6722*** (0.0623)
Observations	1,602	1,602
Number of Groups	315	315
Number of Instruments	216	144
AR(1)	1.13e-05	4.97e-05
AR(2)	0.180	0.344
Hansen	0.759	0.461

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the results by type-dimension. *Debt1* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Same12* is a dummy variable that equals one if the LCS and the first MLS are from the same type and zero otherwise. *Same123* is a dummy variable that equals one if the LCS and the first two MLS are from the same type and zero otherwise. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *ROA-sd* is the standard deviation of the firm's return on assets over the previous five years. *ANBE* is the abnormal earnings estimated as the change in EBITDA from year t to year t + 1 divided by the market value of equity in year t. *AMA* is the weighted average of the maturities of current and long-term assets. *MTB* is the market-to-book ratio. *Ratio*, *Hdis5*, *Size*, *Leve*, *STD\_ROA*, *ABNE*, and *MTB* are winsorised at the 1st and 99th percentiles *AMA* is winsorised at the 3rd and 97th percentiles

## **7.6 Robustness checks and additional analysis**

This section reconsiders Model 7-3 with the help of new type-dimension variables. These variables are studied based on the largest two types in the sample used. This section provides more evidence on the role of MLS homogeneity by considering the most dominant two types in the sample: family and institutional holdings. In addition, this section provides an alternative measure of corporate debt maturity (*Debt2*), defined as the ratio of long term over total debt. Finally, this section provides evidence using two estimation methods: Propensity Score Matching (PSM) and Two-Stage least squares (2SLS) regression analysis.

### **7.6.1. Additional analysis**

Table 7-6 concludes that the presence of MLS lengthens corporate debt maturity after adding the type-dimension. This section revisits Model 5-3 and adds more evidence regarding the largest two types presented in the sample. Compared with the results in Table 7-6 (Columns 1 and 2), Table 7-7 (Columns 1) shows that the interaction term between *MLS5* and *Maj30* exhibits a positive statistical significant impact at the 1% significance level. The results of such interaction shed more evidence on the coalition formation effect. The LCS and MLS combined effect increases the intensity of the relationship between *MLS5* and *Debt1* compared to the results reported in the main analysis, confirming the coalition formation effect.

In addition, Table 7-7 (Columns 3 and 4) shows the impact of interaction terms of both types of institutional investors. Both specifications reflect a positive and significant impact on *Debt1*, suggesting that institutional investors are more willing to reject extra monitoring from short debt lenders.

**Table 7-7 Additional analysis with specific MLS type on corporate debt maturity.**

VARIABLES	(1) Debt1	(2) Debt1	(3) Debt1	(4) Debt1
Debt1 <sub>t-1</sub>	0.1744*** (0.0055)	0.1273*** (0.0094)	0.1298*** (0.0081)	0.1168*** (0.0082)
MLS5* Maj30	0.1316*** (0.0061)			
MLS5* Fam12		-0.0286 (0.0261)		
MLS5* Ins12			0.0880* (0.0472)	
MLS5* Bank12				0.0807*** (0.0244)
Size	0.0685*** (0.0014)	0.0716*** (0.0030)	0.0737*** (0.0028)	0.0692*** (0.0029)
Leve	0.8691*** (0.0079)	0.9146*** (0.0127)	0.9166*** (0.0118)	0.9111*** (0.0130)
STD_ROA	0.0194*** (0.0024)	0.0199*** (0.0046)	0.0220*** (0.0037)	0.0194*** (0.0050)
ABNE	-0.0298*** (0.0018)	-0.0275*** (0.0036)	-0.0281*** (0.0031)	-0.0320*** (0.0028)
AMA	0.0001*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)
MTB	-0.0007*** (0.0001)	-0.0005*** (0.0002)	-0.0007*** (0.0002)	-0.0003* (0.0002)
Constant	-0.6081*** (0.0165)	-0.6579*** (0.0338)	-0.6658*** (0.0310)	-0.6273*** (0.0333)
Observations	1,612	1,602	1,602	1,602
Number of Groups	315	315	315	315
Number of Instruments	264	216	216	216
AR(1)	9.12e-06	2.86e-05	3.88e-05	1.09e-06
AR(2)	0.101	0.446	0.389	0.102
Hansen	0.564	0.729	0.673	0.575

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the results using the presence of family and institutional holding. *FAM12* is a dummy variable that equals one if the LCS and 1st MLS are a family and zero otherwise. *Ins12* is a dummy variable that equals one if the LCS and 1st MLS are institutional investors and zero otherwise. *Bank12* is a dummy variable that equals one if the LCS and 1st MLS are pressure-sensitive institutional investors and zero otherwise. The rest of the variables are defined in Table 7-5.

### 7.6.2. Corporate debt maturity measure

Table 7-8 reports Model 7-2 after replacing *Debt1* with *Debt2*. Table 7-8 shows that *MLS5* is statically significant at the 5 % level. However, both *Number5* and *Hdis5* still hold the same sign without statistical significance.

**Table 7-8 Robustness analysis using (Debt2).**

VARIABLES	(1) Debt2	(2) Debt2	(3) Debt2
Debt2 <sub>t-1</sub>	0.3982*** (0.0561)	0.4119*** (0.0551)	0.3717*** (0.0562)
Debt2 <sub>t-2</sub>	0.1741*** (0.0498)	0.1815*** (0.0502)	0.1150** (0.0460)
MLS5	0.1875** (0.0817)		
Number5		0.0147 (0.0204)	
Hdis5			-0.0018 (0.0029)
Size	0.0113 (0.0131)	0.0108 (0.0127)	0.0146 (0.0135)
Leve	0.4774*** (0.1310)	0.4057*** (0.1258)	0.5419*** (0.1285)
STD_ROA	0.0269 (0.0225)	0.0268 (0.0208)	0.0387 (0.0237)
ABNE	-0.0544 (0.0670)	-0.0086 (0.0640)	0.0142 (0.0553)
AMA	-0.0003 (0.0002)	-0.0002 (0.0002)	-0.0004** (0.0002)
MTB	-0.0031 (0.0033)	-0.0027 (0.0034)	-0.0014 (0.0033)
Constant	-0.0840 (0.1523)	0.0396 (0.1430)	0.0903 (0.1421)
Observations	781	781	781
Number of Groups	202	202	202
Number of Instruments	63	63	63
AR(1)	1.36e-05	1.79e-05	7.34e-06
AR(2)	0.651	0.408	0.844
Hansen	0.423	0.345	0.210

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the main analysis for the variables used in the main empirical analysis. Debt2 is calculated by dividing long term over total debt. The rest of the variables are defined in Table 7-5.

### 7.6.3. Instrumental variable methods

This section further addresses the endogeneity issue previously outlined in chapter four by employing Two-Stage least squares (2SLS) regression analysis and Propensity Score Matching (PSM). Regarding the former, this chapter follows Laeven and Levine (2008), Mishra (2011), and Paligorova and Xu (2012), and it applies instrumental variables estimation using the average value for each independent variable (*MLS5*, *Number5*, and *Hdis5*) for firms operating in the same industry. The logic behind the use of such instruments is explained as follows.

First, the industry average can explain the presence of MLS in firms operating in the same activities. However, it is doubtful that an individual corporate debt structure of one firm can affect the average corporate debt structure of the whole industry. The corporate debt structure of one firm probably follows the average corporate debt structure of the whole industry (Ben-Nasr et al., 2015; Boubaker et al., 2017; Jiang et al., 2018).

The 2SLS technique follows the same procedure applied in chapters five and six. As Table 7-10 shows, the results indicate positive and significant coefficients of *IV\_MLS5*, *IV\_Number5*, and *IV\_Hdis5*. The F-tests of excluded instruments, the Shea Partial R<sup>2</sup>, and the Kleibergen-Paap LM statistic support the use of these instruments. The second-stage regresses *Debt1* against the fitted value of the instrument (*MLS5\_fitted*, *Number5\_fitted*, and *Hdis5\_fitted*). Table 7-10 (Panel A) shows a significant negative relationship between the relative power of MLS and *Debt1*, providing additional support to **H<sub>11</sub>**.

**Table 7-9 The effect of MLS on corporate debt maturity (Debt1) using 2SLS.**

VARIABLES	(2) Debt1	(4) Debt1	(6) Debt1
Panel A: Second-stage regressions			
MLS5_fitted	0.0052 (0.1073)		
Number5_fitted		0.0074 (0.0333)	
Hdis5_fitted			-0.0258*** (0.0069)
Size	0.0393*** (0.0047)	0.0386*** (0.0055)	0.0438*** (0.0043)
Leve	0.9138*** (0.0578)	0.9159*** (0.0560)	0.9601*** (0.0445)
STD_ROA	-0.0074 (0.0055)	-0.0074 (0.0056)	-0.0026 (0.0079)
ABNE	-0.0359* (0.0214)	-0.0367* (0.0211)	-0.0360* (0.0216)
AMA	-0.0000 (0.0001)	-0.0000 (0.0001)	-0.0001 (0.0001)
MTB	-0.0046*** (0.0007)	-0.0046*** (0.0007)	-0.0050*** (0.0008)
Constant	-0.2263*** (0.0746)	-0.2380*** (0.0725)	-0.2067*** (0.0430)
Observations	1,706	1,706	1,706
R-squared	0.5207	0.5202	0.1685
Panel B: First-stage regressions			
IV_MLS5	0.8242*** (0.1776)		
IV_Number5		0.8626*** (0.1718)	
IV_Hdis5			0.7326*** (0.1244)
Shea's partial R <sup>2</sup>	.01467	.01373	.01564
F-test of excluded instruments	21.53	25.21	34.70
Kleibergen-Paap LM statistic:	21.27	24.10	32.48
Underidentification test			
	(p < 0.01)	(p < 0.01)	(p < 0.01)

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the main analysis for the variables used in the main empirical analysis. *Debt1* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of large shareholders behind the largest up to fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences for each shareholder. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *ROA-sd* is the standard deviation of the firm's return on assets over the previous five years. Return on assets is calculated using the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *ANBE* is the abnormal earnings estimated as the change in EBITDA from year t to year t + 1 divided by the market value of equity in year t. *AMA* is the weighted average of the maturities of current and long-term assets. *MTB* is the market-to-book ratio. *Ratio*, *Hdis5*, *Size*, *Leve*, *STD\_ROA*, *ABNE*, and *MTB* are winsorised at the 1st and 99th percentiles *AMA* is winsorised at the 3rd and 97th percentiles

Regarding the PSM procedure, the chapter follows the same procedure applied in the last two chapters. The PSM procedure yields a subset that includes 1,706 firm-year observations, of which 181 observations without the presence of MLS. Table 7-10 shows that both *MLS5* and *Hdis5* are consistent with the results provided in the main analysis.

**Table 7-10 The effect of MLS on corporate debt maturity (Debt1) using PSM.**

VARIABLES	(1) Debt1	(2) Debt1	(3) Debt1
MLS5	0.0324** (0.0133)		
Number5		0.0034 (0.0039)	
Hdis5			-0.0024*** (0.0007)
Size	0.0383*** (0.0030)	0.0387*** (0.0030)	0.0396*** (0.0030)
Leve	0.9187*** (0.0232)	0.9143*** (0.0232)	0.9173*** (0.0230)
STD_ROA	-0.0084 (0.0073)	-0.0082 (0.0073)	-0.0075 (0.0073)
ABNE	-0.0364** (0.0171)	-0.0350** (0.0171)	-0.0347** (0.0170)
AMA	-0.0000 (0.0001)	-0.0000 (0.0001)	-0.0000 (0.0001)
MTB	-0.0046*** (0.0008)	-0.0046*** (0.0008)	-0.0046*** (0.0008)
Constant	-0.2384*** (0.0335)	-0.2243*** (0.0334)	-0.2162*** (0.0322)
Observations	1,706	1,706	1,706
R-squared	0.5213	0.5198	0.5233
Adjusted R <sup>2</sup>	0.5193	0.5179	0.5214

Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. This table shows the main analysis for the variables used in the main empirical analysis. *Debt1* is the difference between a firm's total liabilities and current liabilities divided by total liabilities. *MLS5* is a dummy variable that equals one if the firm has two MLS at the 5% threshold and 0 otherwise. *Number5* is the number of large shareholders behind the largest up to fourth at the 5% threshold. *Hdis5* is the sum of squares of the differences for each shareholder. *SIZE* is the natural logarithm of total assets in thousands of GBP. *Leve* equals long term debt divided by total assets. *ROA-sd* is the standard deviation of the firm's return on assets over the previous five years. Return on assets is calculated using the ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year. *ANBE* is the abnormal earnings estimated as the change in EBITDA from year t to year t + 1 divided by the market value of equity in year t. *AMA* is the weighted average of the maturities of current and long-term assets. *MTB* is the market-to-book ratio. *Ratio*, *Hdis5*, *Size*, *Leve*, *STD\_ROA*, *ABNE*, and *MTB* are winsorised at the 1st and 99th percentiles *AMA* is winsorised at the 3rd and 97th percentiles

## 7.7 Conclusion

This chapter provided evidence regarding the effect of MLS on corporate debt maturity. Using a sample of listed firms in the AIM market over the 2010-2019 period, the findings

support the idea that MLS form a winning coalition with the LCS. The findings demonstrated that MLS are exercising their power to impose longer debt maturity choices in which they align their decision regarding debt choices with the LCS. The chapter confirmed that MLS aim to secure their PBC, not protect minority shareholders.

## **Chapter 8 : Summary and Conclusions**

### **8.1 Restatement of the Research Problem and the Research Questions**

The research of ownership structure has considered many control mechanisms affecting firms' overall outcomes and attributes. In the same line, shareholders protection regulations provide many requirements to protect shareholders from potential expropriation from the management or the LCS. Internally, ownership structure can create a room in which large owners play a monitoring role. In this vein, large shareholders may use their power and incentive for their self-interest to extract private benefits of control. Scholars have documented firms with LCSs and a sea of owners (Shleifer and Vishny, 1986) or firms with LCSs, MLS, and a sea of owners (La Porta et al., 1999). In the latter, MLS have enough incentives and power to interact with their firms to extract PBC using the voice and exit methods (Edmans and Manso, 2011).

Yet, no study has examined MLS's influential role within the configurational approach in SMEs. This study argues that compared to other markets, AIM is not only special because of the presence of MLS, but it has major differences in its structure and disclosure requirements (Hornok, 2014). Also, there is no consensus on the definitions of MLS. Most of the studies use the 10% threshold provided by La Porta et al. (1999). However, this definition has no theoretical justification, and the use of a lower threshold is recommended (Edmans and Holderness, 2017). Thus, this study traces all direct ownership of 1% or more to identify the ultimate owners. Then, the 5% threshold is used to define MLS.

Finally, this study aims to examine the role played by MLS in three aspects, namely, firm performance, audit fees, and corporate debt maturity. The study seeks to understand the effect of MLS presence, number, and relative size on performance, audit fees, and corporate debt maturity. Second, the study aims to interpret the role of the type of MLS on the relationship between MLS and performance, audit fees, and corporate debt maturity. The type-dimension is introduced to understand the effect of large shareholders' homogeneity.

This chapter starts with a restatement of the research problem and the research question. Then, section two summarises the evidence and interpretation of the results. The remaining of this chapter is structured as follows: 1) Description of the research methodology, 2) limitations of the research, 2) research implications, and 3) key areas for future research.

## **8.2 Summary of the Research Findings and Theoretical Implications**

### **8.2.1. The Effect of MLS on firm performance**

The results provided in the first empirical chapter investigate the relationship between MLS and firm performance. The chapter builds the argument of the expected relationship between the two variables on four main hypotheses. In this regard, the first three hypotheses focus on the effect of three distinct MLS proxies on firm performance. In these hypotheses, the study assumes that MLS are harmful to their firm based on the entrenchment effect suggested by Kahn and Winton (1998). The choice of the entrenchment effect is based on the features of AIM and its related ownership structure. Finally, the study considers the homogeneity between the largest two and three shareholders. It assumes that MLS homogeneity increases the intensity of the relationship between MLS and firm performance.

Table 8-1 summarises the results of the first empirical chapter. Two dependent variables are tested against three MLS variables, namely *MLS5*, *Number5*, and *Hids5*. The results show that both the presence and number of MLS are negatively related to firm performance. Previous theoretical and empirical studies suggest that the negative effect means that MLS divert corporate resources. More precisely, the results from *Number5* confirm the coalition formation effect suggested by (Bennedsen and Wolfenzon, 2000).

Moreover, the coalition formation is supported by the Herfindahl dispersion measure (*Hdis5*), in which *Hdis5* is positively related to *ROA*. When *Hdis5* is low, equally distributed shares increase the likelihood to form a coalition between the LCS and MLS which eventually decreases firm performance. The results in Table 8-1 are consistent and are in line with the hypotheses proposed in the first empirical chapter.

### **8.2.2. The Effect of MLS on audit fees**

Table 8-2 shows the results from the second empirical chapter. Constant with the first empirical chapter, the second empirical chapter build the argument of the relationship between MLS and audit fees on four hypotheses. The logic of the relationship is built on the following statements. The entrenchment effect and the coalition formation effect support the idea that the LCS and MLS are better positioned to extract corporate resources from minority shareholders. Therefore, both agency conflicts and their associated costs will be more pronounced. The auditors must assess the firm's characteristics, including its ownership structure. Based on their assessment, the external auditors must consider any risk associated with the two agency

conflicts. Therefore, external auditors will assess firms with higher agency conflict as a potential risk that requires more audit efforts and high fees.

**Table 8-1 Summary of the results on the effect of MLS on firm performance.**

<b>Dependent variable: ROA</b>				
Sample period 2010-2019				
#	Independent variable	Expected sign	Results	Sig*
H1	MLS5	-	-	YES***
H2	Number5	-	-	YES***
H3	Hdis5	+	+	YES**
H4	MLS5 x Same12	-	-	YES***
	MLS5 x Same123	-	-	YES***
<b>Additional tests</b>				
<b>Dependent variable: ROA</b>				
Independent variable		Expected sign	Results	Sig*
MLS5*Maj30		-	-	YES***
MLS5*Fam12		-	-	YES***
MLS5*Ins12		-	-	No
MLS5*Bank12		-	-	YES**
<b>Dependent variable: TQs</b>				
#	Independent variable	Expected sign	Results	Sig*
H1	MLS5	-	-	YES***
H2	Number5	-	-	YES***
H3	Hdis5	+	+	NO
*(*** p<0.01, ** p<0.05, * p<0.1)				

Table 8-2 shows the results related to the above hypotheses. The table shows that *MLS5* and *Number5* are associated with a positive relationship with *Fees* in the AIM firms. Moreover, the results show that *Hdis5* is positively related to *Fees* at the 1% significance level. The results collectively reveal that the LCS and MLS expropriate their firms by forming a winning coalition, imposing the entrenchment effect (Kahn and Winton, 1998; Zwiebel, 1995) and the coalition formation effect (Bennedson and Wolfenzon, 2000). Based on the entrenchment effect and the coalition formation effect, auditors view firms with high agency conflicts as a potential risk, leading to higher audit fees.

**Table 8-2 Summary of the results using audit fees.**

<b>Dependent variable: Audit fees</b>				
Sample period 2010-2019				
#	Independent variable	Expected sign	Results	Sig*
H5	MLS5	+	+	YES***
H6	Number5	+	+	YES***
H7	Hdis5	-	-	YES***
H8	MLS5 x Same12	+	+	YES***
	MLS5 x Same123	+	+	YES***
<b>Additional tests</b>				
Independent variable		Expected sign	Results	Sig*
MLS5*Maj30		+	+	YES***
MLS5*Fam12		+	+	YES***
MLS5*Ins12		+	+	No
MLS5*Bank12		+	+	YES*
*(*** p<0.01, ** p<0.05, * p<0.1)				

### 8.2.3. The Effect of MLS on corporate debt maturity

Table 8-3 summarises the results of the third empirical chapter. *Debt1* is regressed against three MLS independent variables. Consistent with the previous two empirical chapters, the third chapter uses the same hypothesis's structure. The logic of the argument is based on the

following statements. First, entrenched owners tend to use their power to divert corporate resources at the expense of minority shareholders. Second, the winning coalition tends to avoid frequent monitoring by debt holders. Therefore, the LCS and MLS will prefer longer debt maturity. Table 8-3 shows the results of the third empirical chapter and reveals that the results confirm the four hypotheses.

**Table 8-3 Summary of the results using Debt1 and Debt2.**

<b>Dependent variable: Debt1</b>				
Sample period 2010-2019				
#	Independent variable	Expected sign	Results	Sig*
H9	MLS5	+	+	YES***
H10	Number5	+	+	YES***
H11	Hdis12_5	-	-	YES***
H12	MLS5 x Same12	+	+	YES***
	MLS5 x Same123	+	-	No
<b>Additional tests</b>				
Independent variable		Expected sign	Results	Sig*
MLS5*Maj30		+	+	YES***
MLS5*Fam12		+	-	No
MLS5*Ins12		+	+	YES*
MLS5*Bank12		+	+	YES***
<b>Dependent variable: Debt2</b>				
#	Independent variable	Expected sign	Results	Sig*
H9	MLS5	+	+	YES**
H10	Number5	+	+	No
H11	Hdis5	-	-	No

\*(\*\*\* p<0.01, \*\* p<0.05, \* p<0.1)

### **8.3 Summary of the Research Methodology**

Empirical studies are conducted by comparing data against a theory or hypothesis. The investigation is performed using a recognised estimation method appropriate to pre-set data. In this study, the first task was to identify the relevant theories related to the research topic. The backbone theory for this study is the agency theory. Through the tracing of all relevant studies, the hypotheses are proposed. Then, secondary data is collected using the Fame databank. The Fame employs the tracing method pioneered by La Porta et al. (1999).

Nonetheless, Fame uses an accurate threshold to trace any direct block with 1% or more compared to the 10% threshold used in La Porta et al. (1999). Moreover, financial data is collected from the same source and compared to annual reports to validate the accuracy of the data. Also, a careful examination of shareholders' names is conducted to ensure that all blocks with similar names are aggregated.

The sample selection procedure followed the same relevant empirical studies. First, all available firms with ultimate ownership data are considered for the 2010-2019 period. Financial and utilities firms are excluded from the sample due to their special nature. The final sample includes 670 firms. The estimation method is used based on the nature of ownership structure variables and their relationship with dependant variables. Since MLS related variables are endogenously determined (Edmans and Holderness, 2017), this study uses the generalised method of moments (GMM) to test the three models used in this research. The analysis is conducted following Roodman (2009) paper with consistent options for the two-step GMM estimator across all chapters.

### **8.4 Research implications**

The impact of this study can be categorised into three main areas: theoretical impact, market/investors impact, and regularity impact. First, this study can enrich the argument of the role played by MLS. Previous studies have provided two main streams for agency conflicts: the principal-principal conflict and the agent-principal conflict. Previous studies assert that the severity of each type of conflict stem from the ownership structure design. Therefore, one cannot separate ownership structure from CG research. In other words, the study asserts that with the dominant presence of MLS across many markets, researchers should consider MLS presence as an important CG pillar. Previous studies support this claim; nonetheless, this study extends the principal-principal conflict to SMEs, in which many assume that agent-principal conflict is the main issue.

Another theoretical implication stems from the contrasting two roles that MLS play. Most studies support that the relationship between MLS and firms' qualities and attributes is linear. However, by comparing this study to other studies, it is obvious that the two contrasting roles depend on the winning coalition's total percentage. Therefore, this study can be used to support Cai et al. (2016) theoretical model in which MLS can play a monitoring role up to a certain level, and then the role converts into an undesirable one to minority shareholders. This study ensures that if LCSs and MLS dominate the market, the winning coalition will reach the turning points stated in Cai et al. (2016). Therefore, this study assures that the entrenchment effect is more pronounced when the total percentage of holding by the winning coalition is relatively high. However, if the dispersion between MLS and the LCS is high, MLS act as an extra monitoring mechanism.

Investors in AIM can benefit from the results of this study. The results show that MLS exercise their power to secure PBC by forming a coalition with the LCS; thus, they expropriate minority shareholders. Although PBC extraction is hard to quantify, their effect is clear on the three dependent variables in this study. Therefore, any large potential investor should pay attention to the active role of LCSs and MLS in AIM. Neglecting such a role may lead other MLS to expropriate such potential block.

Finally, policymakers can use this study to improve the CG standards of AIM. As stated before, AIM is considered a new experiment in terms of the CG framework. AIM regulators adopt the use of Nomads. As of January 2021, the AIM Rules for Nominated Advisers have placed a clear rule to govern the relationship between the Nomads and MLS. Independence in the set of rules asserts that the Nominated Advisers should demonstrate how independence is achieved in their relationship with the supervised firm. Schedule One of the Rules mentions that the Nomads should understand the firm structure, including large shareholders with 10% or more of the total holding. However, since this study argues that MLS at the 5% threshold can interact and affect their firm's decision, qualities and attributes, the Rules should identify what constitutes a large investor, as it is worth noting the effect of the 5% threshold on the independence.

## **8.5 Research limitations**

It is important to outline some limitations of this study. The results of this study should be interpreted in conjunction with the limitations. Three main limitations are outlined in this section relating to theoretical and empirical diverged arguments, data and sample constraints,

and variables' choices. First, previous literature on ownership structures has identified different and contrasting theories, hypotheses, and approaches to understand the relationship between MLS and firms' attributes and qualities. The general premise of this study suggests that MLS have the power to force monitoring over the LCS; however, they choose to disregard this role. While doing so, they align their interest with the LCS to secure PBC.

Nonetheless, the results cannot comprehensively evaluate the overall monitoring mechanism. In other words, MLS are only one internal monitoring mechanism among many others, such as audit committees and insider board members. Therefore, the reader should refrain from generalising the findings of this study on other internal monitoring mechanisms or making inferences on the overall corporate governance quality. In the same line, the reader should consider that this study is the first to consider SMEs, which may provide room for differences from other studies conducted for large publicly firms. To overcome these limitations, the study stems its premises based on the most recent arguments on the role played by MLS, and it considers a lower threshold to identify MLS.

Furthermore, the sample is not randomly selected and depends on pre-set criteria due to two main constraints. First, Fame discloses firms that are listed on the day of the query, which means that any delisted firms during the sample period have no available data. To mitigate this issue, the data used in this study includes all firms listed since the launch of the AIM market and continued until Jun 2021<sup>33</sup>. Thus, firms that transfer to the main market or become privately held are excluded, leaving out only SMEs. Second, AIM has many firms operating in the financial sector. These firms have special accounting practices and extra monitoring mechanisms applicable to their trading and governance practices. Such firms are pre-excluded from the sample. Therefore, the results can only be generalised to sectors of the same nature used in the study.

Finally, there are some limitations regarding the variables used in this study. The first empirical chapter prefers ROA over Tobin's Q as the main dependent variable. Tobin's Q is a performance measure that depends on market price shares. A relatively high number of the firms included in the sample have had IPOs during the period studied. These new IPOs have

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<sup>33</sup> The final data set was constructed at that time for more accuracy and to assure that the sample include every possible firm.

affected the share price, resulting in an inconsistent measurement of Tobin's Q. Therefore, this study depends on the accounting measure for shareholders' funds.

### **8.6 Key Areas for Future Research**

The argument of agency theory should be linked to game theory, in which researchers can examine the role played by each block separately in a corporate game. In this matter, researchers can start by identifying a specific threshold. Then, they should identify the most influential shareholders using the distribution of other shares instead of using ultimate block percentages as the main drive of interaction. Using pivotal votes in game theory, each firm would have a specific corporate game decision that will map all possible coalitions that could be formed, resulting in a matrix with two totals: the number of pivotal votes and the number of possible voting combinations. The ratio of the two will identify the influence power, which can be used to calculate control contestability situations. To translate this ratio to actual voting percentages, the total influence power should be adjusted to accompany the 100% voting in corporate voting.

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## Appendix A: Definitions of the variables

Variable	Definition
LCS	The ultimate voting rights for the largest controlling shareholders at the 5% threshold.
V2	The ultimate voting rights for the first MLS behind the LCS at the 5% threshold.
V3	The ultimate voting rights for the second MLS behind the LCS at the 5% threshold.
V4	The ultimate voting rights for the third MLS behind the LCS at the 5% threshold.
V5	The ultimate voting rights for the fourth MLS behind the LCS at the 5% threshold.
Maj30	Dummy variable that equals one if the voting rights held by the LCS exceed 30%
MLS5	Dummy variable that equals one if the firm has two MLS behind the LCS (at the 5% threshold) and zero otherwise.
Number5	The number of MLS (at the 5% threshold), other than the LCS, up to the fourth.
Hdis5	The sum of squares of the differences for each shareholder: $(V1-V2)^2 + (V2-V3)^2 + (V3-V4)^2 + (V4-V5)^2$ .
Same12	Dummy variable that equals one if the LCS and 1st MLS are from the same type and zero otherwise.
Same123	Dummy variable that equals one if the LCS and first two MLS are from the same type and zero otherwise.
FAM12	Dummy variable that equals one if the LCS and 1 <sup>st</sup> MLS is a family and zero otherwise.
INS12	Dummy variable that equals one if the LCS and 1st MLS are pressure-resistant institutional investors and zero otherwise.
Bank12	Dummy variable that equals one if the LCS and 1st MLS is pressure-sensitive institutional investors and zero otherwise.
ROA	The ratio of earnings before interest and taxes divided by the book value of assets at the beginning of the fiscal year.
TQs	The market value of total assets divided by the replacement cost of total assets.
Fees	The natural logarithm of audit fees in thousands of GBP.
Debt1	The difference between a firm's total liabilities and current liabilities divided by its total liabilities.
Debt2	The ratio of long-term debt divided by total debt.
Size	The log of total assets.
Leve	The book value of total long-term liabilities scaled by the book value of total assets.
Tang	Tangible assets scaled by total assets.
Grow	Percentage of sale growth.
Age	Time since first being incorporated.
Int-Sale	The ratio of international sales divided by total sales.
Inv-rec	The sum of inventories and accounts receivable scaled by total assets
CRatio	The ratio of current assets to current liabilities at the end of the fiscal year
IFRS	Dummy variable that equals one if the firm's financial statements are prepared according to IFRS and 0 otherwise
Loss	Dummy variable that equals one if the firm reports a net loss in year t (i.e., negative net income after taxes before extraordinary items and taxes on extraordinary items), and 0 otherwise

<b>Variable</b>	<b>Definition</b>
AMA	The weighted average of the maturities of current and long-term assets.
ANBE	The change in EBITDA from year t to year t + 1 divided by the market value of equity in year t.
MTB	The market value of equity divided by the book value of equity.
STD_ROA	The standard deviation of the firm's return on assets over the previous five years.

## Appendix B: Ordinary Least Squares (OLS) results

This appendix provides OLS estimators using the same dynamic models provided in each empirical chapter. The main analysis in each empirical chapter adopted three estimation methods: the two-step system GMM, the 2SLS technique, and PSM. This appendix provides the results for each model separately using OLS, as outlined in Tables Appx B. 1, Appx B. 2, and Appx B. 3. It is not surprising that the results are relatively inconsistent between the Two-step system GMM estimators and the OLS estimators. The dynamic OLS estimator neglects the endogeneity problem and fails to apply effective instruments. Studies that used the same techniques to address the endogeneity problem find the same inconsistency (Akbar et al., 2016; Wintoki et al., 2012).

**App B- 1: The effect of MLS on firm performance (ROA) using a dynamic OLS model**

	(1) ROA	(2) ROA	(3) ROA
ROA <sub>t-1</sub>	.358*** (.0836)	.3569*** (.0837)	.3575*** (.0833)
ROA <sub>t-2</sub>	.0853** (.0391)	.0854** (.0391)	.0844** (.0388)
MLS5	-.0322 (.02)		
Number5		-.0066 (.0059)	
Hdis5			.0013 (.0009)
Size	.0506*** (.0071)	.0507*** (.0072)	.0501*** (.007)
Leve	-.3157*** (.0755)	-.3138*** (.0755)	-.3138*** (.0753)
Tang	.0842** (.0388)	.0829** (.0386)	.0831** (.0387)
Grow	.0002 (.0002)	.0002 (.0002)	.0002 (.0002)
Age	.0006* (.0003)	.0006* (.0003)	.0006* (.0003)
Constant	-.5219*** (.072)	-.5292*** (.0725)	-.5459*** (.0737)
Observations	2340	2340	2340
R-squared	.4384	.4381	.4382
Year dummies	yes	yes	yes
Industry dummies	yes	yes	yes

*Robust standard errors are in parentheses* \*\*\*  $p < .01$ , \*\*  $p < .05$ , \*  $p < .1$

**App B- 2 The effect of MLS on audit fees (Fees) using a dynamic OLS model**

	(1)	(2)	(3)
	Fees	Fees	Fees
Fees <sub>t-1</sub>	.7554*** (.0201)	.7559*** (.0202)	.7549*** (.0201)
MLS5	.0278 (.0237)		
Number5		.0094 (.0068)	
Hdis5			-.0004 (.0011)
Size	.1411*** (.0132)	.1404*** (.0133)	.142*** (.0132)
Leve	.0704* (.0418)	.0701* (.0416)	.0682 (.0418)
Int-sale	.041** (.0176)	.0409** (.0176)	.041** (.0178)
Inv-rec	.0113 (.0571)	.0122 (.0571)	.0115 (.0571)
CRatio	-.0064 (.0044)	-.0067 (.0044)	-.0065 (.0044)
IFRS	.13* (.0731)	.1282* (.073)	.1265* (.0738)
Loss	.068*** (.017)	.0678*** (.017)	.0688*** (.0171)
Constant	-.6055*** (.1284)	-.6025*** (.1265)	-.5841*** (.1258)
Observations	1179	1179	1179
R-squared	.905	.905	.9049
Year dummies	yes	yes	yes
Industry dummies	yes	yes	yes

*Robust standard errors are in parentheses\*\*\* p<.01, \*\* p<.05, \* p<.1*

**App B- 3 The effect of MLS on corporate debt maturity (Debt1) using a dynamic OLS model**

	(1) Debt1	(2) Debt1	(3) Debt1
Debt1 <sub>t-1</sub>	.4781*** (.0284)	.5115*** (.0276)	.4772*** (.0283)
MLS5	.0093 (.0126)		
Number5		.0003 (.0035)	
Hdis5			-.0011 (.0008)
Size	.0226*** (.003)	.0227*** (.0031)	.023*** (.003)
Leve	.5693*** (.0457)	.5469*** (.0463)	.5707*** (.0449)
STD_ROA	-.0155* (.0089)	-.0104* (.0061)	-.0152* (.0091)
ABNE	-.0309** (.0157)	-.0281* (.016)	-.0304* (.0157)
AMA	0 (.0001)	0 (.0001)	-.0001 (.0001)
MTB	-.0019*** (.0006)	-.0022*** (.0006)	-.0019*** (.0006)
Constant	-.1343*** (.0326)	-.1574*** (.0323)	-.1277*** (.0302)
Observations	1612	1612	1612
R-squared	.6961	.6863	.6967
Year dummies	yes	yes	yes
Industry dummies	yes	yes	yes

*Robust standard errors are in parentheses\*\*\* p<.01, \*\* p<.05, \* p<.1*

## Appendix C: Empirical results using the 10% threshold

Section 4.2.2 concluded that the 5% threshold used in this study is applied to accommodate the recommendation provided by (Edmans and Holderness, 2017) to adopt a lower threshold than the commonly used 10% threshold. Nonetheless, in this section, the study re-calculates the independent variables using the 10% threshold and re-runs the main analysis for each empirical chapter. As a starting point, considering a different threshold will affect the calculation for the independent variables as the definitions for the independent variables depend entirely on the definition of the threshold. Thus, this section considers three independent variables using the 10% threshold, namely *MLS10*, *Number10*, and *Hdis10*.

As App C- 1 shows, considering the 10% threshold affects the descriptive statistics compared to Table 4-3. In this table, *MLS10* has an average of .561 compared to .883 using the 5% threshold. The average in this section is relatively comparable with other studies that considered the 10% threshold. For example, (Ben-Nasr et al., 2015) find that 34.1% of French firms have at least two MLS behind the LCS, while (El Ghouli et al., 2018) report that MLS dominate 37.41% of Western European Firms. Likewise, Attig et al. (2009) report that MLS are present in 33.2% of eastern Asian firms. Regarding the number of MLS other than the LCS, the alternative sample reveals that there are 1.955 blocks on average compared to 3.253 blocks using the 5% threshold. Regarding the dispersion among shareholders, *Hdis10* shows an average of 3.954 compared to 2.994 using the 5% threshold. Regarding the results, App C- 2, App C- 3 and App C- 4 show that the results are relatively consistent with the results across the three empirical chapters.

**App C- 1 Summary statistics for the independent variables using the 10% threshold**

	N	Mean	max	min	Std. Dev.	p25	Median	p75
MLS10	2910	.561	1.000	0	.496	0	1	1
Number10	2910	1.955	4.000	1	1.037	1	2	3
Hdis10	2910	3.954	35.144	.023	5.498	1.321	2.109	3.975

This table shows descriptive statistics for the independent variable using the 10% threshold. *MLS10* is a dummy variable that equals one if the firm has two MLS at the 10% threshold and 0 otherwise. *Number10* is the number of MLS behind the LCS up to the fourth at the 10% threshold. *Hdis5* is the sum of squares of the differences between the first and the second-largest voting rights, the second and the third largest voting rights, the third and fourth voting rights, and the fourth and fifth voting rights at the 10% % threshold.

**App C- 2 The effect of MLS on firm performance (ROA) using the 10% threshold**

VARIABLES	(1) ROA	(2) ROA	(3) ROA
ROA <sub>t-1</sub>	0.3071*** (0.0099)	0.3656*** (0.0129)	0.3505*** (0.0093)
MLS10	-0.1003*** (0.0099)		
Number10		-0.0310*** (0.0031)	
Hdis10			0.0013** (0.0005)
Size	0.0792*** (0.0062)	0.0556*** (0.0058)	0.0633*** (0.0054)
Leve	-0.3609*** (0.0316)	-0.3196*** (0.0255)	-0.3332*** (0.0218)
Tang	0.0767*** (0.0272)	0.1761*** (0.0268)	0.2348*** (0.0290)
Grow	-0.0008*** (0.0001)	-0.0007*** (0.0001)	-0.0009*** (0.0001)
Age	-0.0001 (0.0006)	0.0002 (0.0005)	-0.0006 (0.0006)
Constant	-0.7700*** (0.0647)	-0.5840*** (0.0550)	-0.7438*** (0.0515)
Observations	1,708	1,708	1,708
Number of Groups	461	461	461
Number of Instruments	219	217	217
AR(1)	0.000695	0.00384	0.00137
AR(2)	0.415	0.734	0.662
Hansen	0.237	0.110	0.261

Standard errors in parentheses\*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**App C- 3 The effect of MLS on audit fees (Fees) using the 10% threshold**

VARIABLES	(1) Fees	(2) Fees	(3) Fees
Fees <sub>t-1</sub>	0.7407*** (0.0013)	0.7368*** (0.0006)	0.9508*** (0.0509)
MLS10	0.1027*** (0.0008)		
Number10		0.0501*** (0.0001)	
Hdis10			-0.0236*** (0.0073)
Size	0.1417*** (0.0010)	0.1348*** (0.0003)	0.0389 (0.0278)
Leve	0.1202*** (0.0016)	0.0897*** (0.0015)	0.0890 (0.1340)
Int-sale	0.0657*** (0.0020)	0.0346*** (0.0006)	-0.0043 (0.0843)
Inv-rec	-0.0224*** (0.0060)	0.0577*** (0.0026)	-0.0779 (0.1550)
CRatio	0.0079*** (0.0001)	0.0117*** (0.0001)	0.0012 (0.0120)
IFRS	0.2573*** (0.0194)	0.2902*** (0.0170)	-0.2903 (0.2390)
Loss	0.0648*** (0.0007)	0.0642*** (0.0003)	0.0235 (0.0232)
Constant	-0.6835*** (0.0192)	-0.6802*** (0.0186)	0.2549 (0.2943)
Observations	768	768	768
Number of Groups	242	242	242
Number of Instruments	217	217	53
AR(1)	0.000997	0.00121	0.000632
AR(2)	0.203	0.402	0.665
Hansen	0.370	0.415	0.239

Standard errors in parentheses\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**App C- 4 The effect of MLS on corporate debt maturity (Debt1) using the 10% threshold**

VARIABLES	(1) Debt1	(2) Debt1	(3) Debt1
Debt1 <sub>t-1</sub>	0.2266*** (0.0406)	0.2152*** (0.0449)	0.2063*** (0.0442)
MLS10	0.0218 (0.0183)		
Number10		0.0056 (0.0104)	
Hdis10			-0.0130*** (0.0029)
Size	0.0458*** (0.0118)	0.0513*** (0.0140)	0.0582*** (0.0118)
Leve	0.8275*** (0.0748)	0.8232*** (0.0907)	0.7546*** (0.0772)
STD_ROA	0.0184 (0.0170)	0.0140 (0.0186)	-0.0021 (0.0191)
ABNE	-0.0708* (0.0360)	-0.0389 (0.0466)	-0.0578 (0.0392)
AMA	0.0001 (0.0002)	0.0000 (0.0003)	0.0001 (0.0002)
MTB	-0.0082** (0.0034)	-0.0082** (0.0036)	-0.0087** (0.0037)
Constant	-0.3723*** (0.1256)	-0.4207*** (0.1459)	-0.4200*** (0.1233)
Observations	1,028	1,028	1,028
Number of id	274	274	274
Number of Instruments	74	62	74
AR(1)	0.00188	0.00211	0.000737
AR(2)	0.411	0.422	0.225
Hansen	0.272	0.272	0.568

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1