The Evolution of the Board of Directors in the UK Corporate Governance Context

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DEDICATION

To My Mother (Mohina) and soul of My Father (Salim)-may Allah be pleased with him

To My Wife (Fatema), My Daughter (Alghalya), and My Sons (Salim and Mohamed)

Thank you for your Love, Support and Sacrifice

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ABSTRACT

This study first provides a descriptive evidence on the evolution of corporate governance in the UK over 2003-2015. This research reveals that the board size of UK boards was somewhat stable over the 2003-2015 but with a noticeable drop during the 2007 financial crisis. Proportion of non-executive independent directors has increased dramatically over the period of 2003-2015. This is in line with the UK corporate governance codes that recommend most board of directors should be non-executive independent directors. Additionally, CEO duality has also seen a dramatic decrease from 21% in 2003 to almost 7% in 2015. This also reflects the UK corporate governance's approach to separate the roles of chairman and CEO. Another important observation regarding the evolution of UK boards is that women representation on corporate boards sharply increased over the study period, mostly post the publication of the Davies Report (2011).

Additionally, this research examines whether the presence of female and foreign directors on the remuneration committee has an influence on say-on-pay voting and chief executive officer (CEO) remuneration. Based on panel data from the UK's FTSE 350 firms between 2003 and 2015, this study finds that the presence of women on the remuneration committee is associated with a reduction in shareholders' dissent via say-on-pay voting and leads to lower CEO cash in terms of bonus remuneration, but not CEO equity remuneration. Moreover, this research finds that the presence of foreign directors on remuneration committees is associated with more shareholder dissent votes via say-on-pay voting and higher CEO remuneration, including cash, equity and bonus remuneration.

This study offers theoretical and academic implications and provides empirical evidence that gender and nationality diversity of directors on a remuneration committee plays a significant role in shaping shareholders' dissent via say-on-pay voting and CEO pay. The results also

provide empirical support for previous studies which find that women are more effective monitors (Adams and Ferreira, 2009; Carter et al., 2003). Additionally, this research provides empirical support for previous studies that find that foreign directors are less effective monitors and lead to higher CEO pay (Masulis et al., 2012).

Furthermore, this study provides practitioner and policy implications. First, the findings of this research contribute to the on-going debate regarding board diversity, say-on-pay voting and CEO pay literature. Specifically, this study has practical implications, in that recent recommendations for more women on boards, such as those of the Davies Reports, have been useful and effective. This study also supports recent recommendations by the Hampton-Alexander Review (2016) for more representation of women on board sub-committees, such as the remuneration committee. Finally, the results of this research suggest that caution is needed when proposing an increase in foreign directors on board sub-committees, as their insufficient oversight can significantly exacerbate agency conflicts, rather than resolve them, potentially leading to higher CEO pay and a consequent increase in shareholders' dissent on remuneration policy via the say-on-pay.

CHAPTER I: INTRODUCTION

1.1 Background of the Study

Corporate governance is a relatively new phenomenon in the business and economics literature, and its theories have been developed from various fields including finance, accounting, economics, law and management (Mallin, 2016). More specifically, the term *corporate governance* was not known officially until the mid-1970s, when the Federal Securities and Exchange Commission (SEC) in the United States (US) first introduced corporate governance as an official term on their Federal Register (Cheffins, 2013; Ocasio and Joseph, 2005), whereas in the United Kingdom (UK), the term corporate governance was less frequently used before the 1990s , for example, corporate governance was first used in the UK newspaper, *The Times*, in 1985 (Cheffins, 2013).

However, the development of corporate governance in the UK started in 1991, when a group of accountancy professionals, the London Stock Exchange and the Financial Reporting Council (FRC), established the Committee on the Financial Aspects of Corporate Governance (Mallin, 2016). The Cadbury Committee was established after a series of corporate scandals in the 1980s and 1990s due to lack of accountability (Cheffins, 1997). The main purpose of the Cadbury Committee was to suggest some recommendations to restore shareholders' confidence in the market.

Corporate governance issues were not widely discussed in the economics, finance and business literature until the late 1970s and the start of the 1980s. Although corporate governance has not been mentioned explicitly in the literature before the 1980s, Jensen and Meckling (1976) and Fama (1980) did address the agency cost theory and the agency problem, which are the cornerstones of corporate governance literature (Cheffins, 2013). Additionally, during the 1970s and 1980s, most of the corporate governance research was

exclusively conducted in the US; however, by the 1990s, the situation changed (Cheffins, 2013), as more research was conducted in the UK. By 2003, there was an 'explosion' of corporate governance research around the globe (Denis and McConnell, 2003).

Corporate governance has been explained and defined in many different ways (for example, Cadbury Report, 1992; Shleifer and Vishny, 1997; Solomon, 2010). Corporate governance is defined as a 'system by which companies are directed and controlled' (Cadbury Report, 1992). A more specific definition by Shleifer and Vishny (1997) is the following:

> Corporate governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment. How do the suppliers of finance get managers to return some of the profits to them? How do they make sure that managers do not steal the capital they supply or invest it in bad projects? How do suppliers of finance control managers?

Shleifer and Vishny's definition assumes that the main objectives of any corporation are shareholder wealth maximisation and secure repayment of debts by debt holders (Goergen, 2012). This definition, however, ignores other stakeholders, such as employees, customers, suppliers and government. The justification behind this assumption arises from the fact that shareholders are the 'residual claimants' of the corporation when it is dissolved, whereas stakeholders other than shareholders can walk away from the company without losing their benefits (Goergen, 2012). In other words, when a company becomes bankrupt, stakeholders' claims will be met before the claims of the shareholders.

In contrast, Goergen and Renneboog (2006) suggest a wider definition of corporate governance that includes all stakeholders, defining corporate governance as the following:

> A corporate governance system is the combination of mechanisms which ensure that the management (the agent) runs the firm for the benefit of one or several stakeholders (principles). Such stakeholders may cover shareholders, creditors, suppliers, clients, employees and other parties with whom the firm conducts its business. (Goergen and Renneboog, 2006)

The differences in corporate governance definitions and objectives are largely reflective of the country's legal system (Goergen, 2012). The Anglo-American system, which is dominated by countries with a common law system, such as the UK and the US, prefers the shareholder model, whereas in countries dominated by civil law, they tend to use the stakeholder model, such as in Germany, France and Japan (Goergen, 2012). Recently the UK Department for Business, Energy and Industrial Strategy (BEIS, 2016 thereafter) proposed a reform of corporate governance that could have given employees, customers and other key stakeholders more power in UK corporate boards. The Prime Minister Theresa May stated the following in the opening statement of the new consultation of the Green Paper:

> Good corporate governance is about having the right checks and balances within big business to strengthen decision making and accountability. This Green Paper therefore focuses on ensuring that executive pay is properly aligned to long term performance, giving greater voice to employees and consumers in the boardroom, and raising the bar for governance standards in the largest privately held companies. (May, 2016)

The BEIS (2016) suggests creating a stakeholder advisory panel or designating one of the current non-executive directors to ensure that the claims of key stakeholders, especially those of the employees, are being satisfied at the board level or appointing a stakeholder representative to the board. This new consultation, in fact, marks a new era of corporate governance in the UK.

Many countries around the world have introduced corporate governance codes. These codes are usually sets of principles regarding corporate governance that target companies publicly traded on stock exchange markets. The main motive of introducing any corporate governance code is a bid to foster better transparency and accountability and increase shareholder confidence levels (Mallin, 2016). The UK is recognised as one of the leading countries for corporate governance (Goergen, 2012), and has some distinguishing features including the following:

- A unitary board system, where executive and non-executive directors sit together and any decision is collectively taken by the whole board of directors.
- A *comply or explain* approach, which suggests that in the case of no compliance, a firm should give proper justifications of non-compliance. This approach gives companies more flexibility to opt out of some of the provisions, as one size does not fit all.
- A board which should include at least 50% of its members as independent non-executive directors.
- The splitting of chief executive officer (CEO) and chairman roles.

(UK Corporate Governance Code, 2016)

The UK Corporate Governance Code has seen many developments since the Cadbury Report (1992). Since 2003, for example, the FRC has issued seven editions of the UK code, namely the Combined Code 2003, the Combined Code 2006, the Combined Code 2008, the UK Corporate Governance Code 2010, the UK Corporate Governance Code 2012, the UK Corporate Governance Code 2014 and the UK Corporate Governance Code 2016.

1.2 Motivation and Contribution of the Study

This research is mainly motivated by reforms that have taken place in the UK since the Cadbury Report (1992). During this period, a number of corporate governance codes and voluntary practices were suggested to help improve the relationship between shareholders and managers and strengthen shareholders' voting rights. These were as follows: no CEO duality and the establishment of a remuneration committee (Cadbury Report, 1992), 50% of directors should be independent non-executive directors (Higgs Report, 2003), the right of shareholders to vote on executive remuneration via the vote on the report of the remuneration committee (Directors' Remuneration Report Regulations, 2002), more engagement by

institutional investors with corporate boards (Stewardship Code, 2010) and more female representation on corporate boards (Davies Report, 2011). Thus, this research first aims to address the evolution of UK corporate governance characteristics. Additionally, this research attempts to address the impact of diversity in firms' remuneration committees on say-on-pay voting and CEO remuneration.

Recent financial crises and scandals have created public anger and unrest regarding CEO pay packages, which have led to calls for reform of executive pay. By 2015, the UK average remuneration for a blue-chip CEO was approximately £4.30 million which, after adjusting for inflation, was three times more than the average CEO pay in 1998 (Patrick, 2017). Such findings have motivated many countries to reform their corporate governance regimes, especially the policies concerning shareholder engagement on executive pay. The UK is no exception, and indeed, in 2002, it was the first country to introduce an advisory non-binding shareholder vote on executive pay. In 2013, the UK introduced a mandatory binding vote on pay polices (at least every three years). This voting approach is known as *say-on-pay*, a tool used by shareholders to express dissent about the recommendations made in remuneration reports (Mallin, 2016). Also, this approach aims 'to enhance the activeness of executive pay by improving transparency and increasing shareholder involvement in its determination' (Stathopoulos and Voulgaris, 2016).

Since 2002, many studies have investigated the antecedents of say-on-pay voting. Among these antecedents that most affect shareholder dissent via say-on-pay voting are higher CEO remuneration, firm performance, firm size and shareholders' investment horizons (e.g. Alissa, 2015; Brunarski et al., 2015; Cai and Walking, 2011; Carter and Zamora, 2009; Conyon, 2016; Conyon and Sadler 2010; Ferri and Maber, 2013; Kimbro and Xu, 2016; Stathopoulos and Voulgaris, 2016).

None of the previous studies has investigated the associations between the gender diversity of remuneration committees and say-on-pay voting. Thus, this study investigates whether the presence of women on remuneration committees is associated with the level of shareholder dissent via say-on-pay. This question is motivated by recent reforms for more female representation on UK corporate boards (e.g. Davies Report, 2011; Hampton-Alexander Review, 2016). The Davies Report (2011) set a target of 25% female representation on FTSE 350 boards by 2015, and the Hampton-Alexander Review (2016) set a new target of 33% female representation by 2020, extending the scope to include executive directors and other senior top managers[1].

Previous studies that stated that foreign directors can act as a 'double-edged sword' served to encourage this research (e.g. Frijns et al., 2016; Masulis et al., 2012; Milliken and Martins, 1996). From one perspective, foreign directors can be beneficial in helping companies gain knowledge about international markets and regulations (Estélyi and Nisar, 2016); however, these directors are found to be less effective monitors and can lead to higher CEO remuneration (Masulis et al., 2012). The UK has the highest number of foreign directors on its corporate boards (Conyon et al., 2016); therefore, this study also investigates the impact of foreign directors on remuneration committees on say-on-pay dissent voting.

Unlike previous work exploring the say-on-pay approach, this study focuses on remuneration committees, which is important because most decisions related to executive remuneration involve the remuneration committee (Daily et al., 1998). A few previous studies have examined the characteristics of remuneration committees associated with CEO remuneration. For example, Conyon and Peck (1998) reported that the independence of remuneration committees in the UK has a limited effect on executive pay. Similarly, in the US, Daily et al. (1998) found no evidence that the independence of a remuneration committee affects CEO

[1] Member of the executive committee

pay. However, a recent study by Bugeja et al. (2015) in the US found that the presence of women on firms' remuneration committees had a negative impact on CEO remuneration.

Furthermore, this study is motivated by previous literature that suggested that firms with more female directors on their remuneration committees are less likely to have higher CEO remuneration (Bugeja et al., 2015). In same vein, Masulis et al. (2012) found that a higher presence of foreign directors on remuneration committees led to higher CEO remuneration. Both studies estimated their models using US data, yet other studies have not investigated whether the presence of female and foreign directors on remuneration committees has an impact on CEO pay using UK data.

There are several reasons that the UK has fairly different corporate governance attributes than the US and rest of the world. First, corporate governance guidance provides extensive details relating to executive remuneration (Goh and Gupta, 2016). Conyon et al. (2016) also added that the UK has one of the best disclosure requirements on executive remuneration, which generates high-quality executive remuneration data. Finally, the UK has the highest percentage of foreign directors among other countries (Conyon et al., 2016). Therefore, this gives an ideal environment to examine the relationship between the presence of female and foreign directors and CEO pay.

1.3 Research Questions

Approximately 25 years have passed since the introduction of the Cadbury Code which formed the basis of UK corporate governance and the subsequent developments leading to the UK Corporate Governance Code. The Code has gone through many amendments, most of which have been directed towards enhancing the role of the board of directors. Therefore, the overall aim of this research is to answer the following questions:

Main questions:

1. *How did the board of directors in the UK corporate governance context evolve during the period of 2003–2015?*
2. *How are diverse remuneration committees related to say-on-pay voting and CEO remuneration?*

Giving the agency theory;

Sub-Question 1:

Does a higher proportion of female and foreign directors on firms' remuneration committees have an impact on shareholders' dissent-via-say-on-pay voting and CEO pay?

Whereas, according to the critical mass theory;

Sub-Question 2:

Do firms with only two or more women and foreign directors on their remuneration committees have an impact on shareholders' dissent-via-say-on-pay voting and CEO pay?

1.4 Summary of Research Hypotheses and Methodology

This study tests eight hypotheses. The first hypothesis addresses the impact of female directors on remuneration committees on shareholder dissent via say-on-pay voting. The second hypothesis relates to the relationship between the presence of female directors on firms' remuneration committees and CEO pay. Similarly, Hypothesis 3 and 4 test the impact of two or more women on remuneration committees on say-on-pay dissent voting and CEO pay. The relationships between foreign directors on remuneration committees and say-on-pay voting and CEO pay are investigated in Hypotheses 5 and 6, respectively. Finally, Hypothesis

7 and 8 examine whether two or more foreign directors on remuneration committees have an influence on say-on-pay dissent voting and CEO pay.

Following previous literature, this study uses two main statistical techniques: the ordinary least squares model (OLS) with logarithm-transferred dependent variables and the logistic model (logit). In addition, propensity score matching and the two-step system of generalised method of moments (GMM) are used for robustness tests and to mitigate the endogeneity problem. The next section briefly describes the findings of this research.

1.5 Summary of Research Findings

This study uses a large sample of the UK's FTSE 350 non-financial firms from 2003 to 2015 and makes several contributions to the extant literature on board diversity, say-on-pay voting and CEO pay. First, this study shows the importance of having women on remuneration committees. Specifically, the research shows that the presence of women on remuneration committees results in fewer shareholder dissent votes on remuneration reports and less CEO bonus remuneration. Second, the research suggests that firms with foreign directors on their remuneration committees have more shareholder opposition via say-on-pay voting and a higher level of CEO remuneration. These findings confirm those of Masulis et al. (2012), who posited that foreign directors are less effective monitors.

1.6 Structure of the Thesis

This research comprises seven chapters, and Figure 1.1 outlines the research structure. Chapter One explains the area of corporate governance in general and the board of directors specifically. In addition, the chapter covers the motivation for this research, the problem statement and the research objectives. Chapter Two highlights the development of corporate governance in the UK.

Chapter Three provides the literature review and is divided into two parts: (i) the theoretical framework of corporate governance and (ii) the previous empirical works on say-on-pay voting, board diversity, remuneration committees and the relationship between board of directors' characteristics and firm performance.

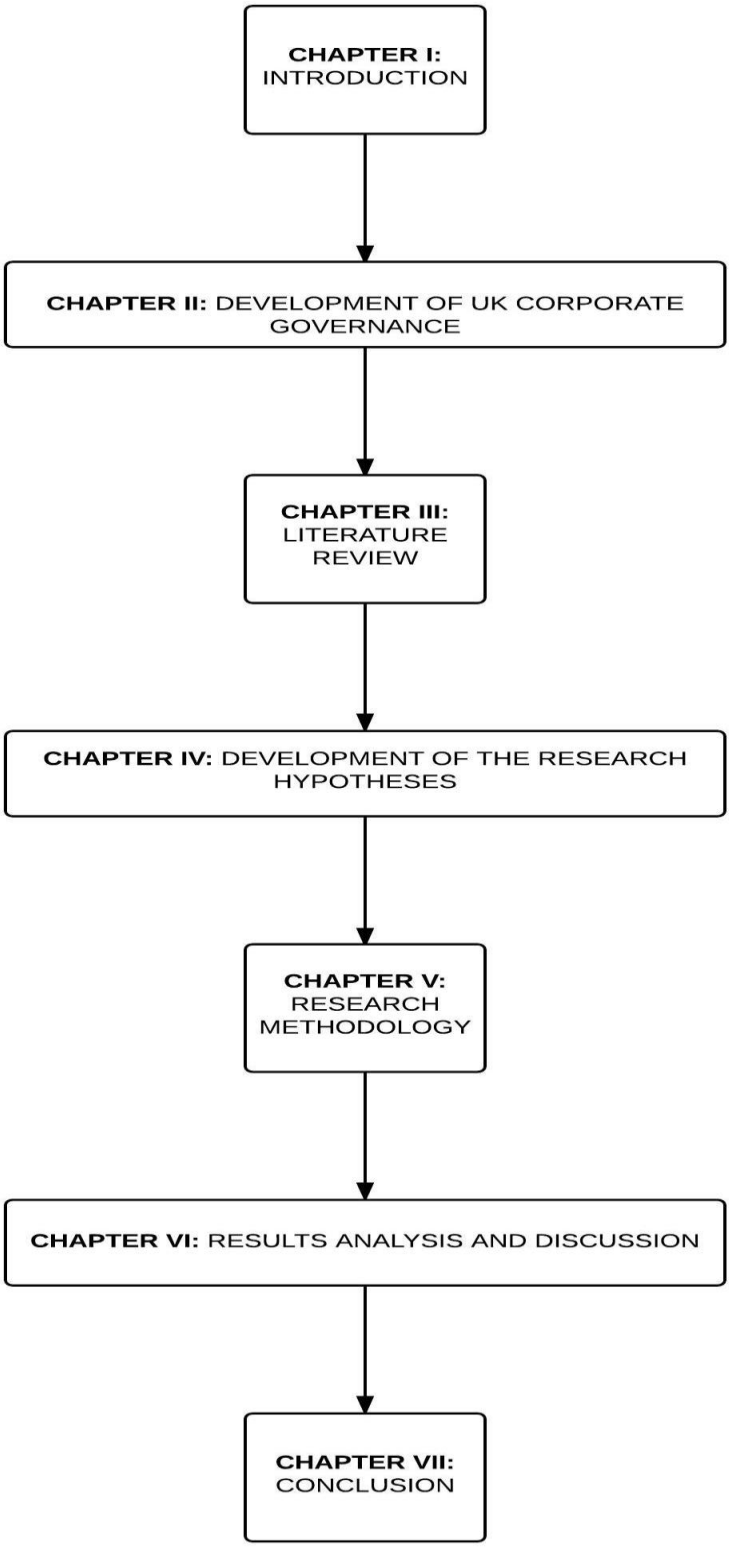
Chapter Four presents the development of the research hypotheses. Chapter Five illustrates the research methodology, or, more specifically, the research data collection and analysis methods. Chapter Six discusses and analyses the research findings, specifically those regarding the impact of female directors and foreign directors on say-on-pay voting and CEO pay.

Chapter Seven summarises the overall results, provides concluding comments, highlights the limitations of the research and suggests areas for future study.

1.7 Conclusion

This chapter introduced a brief background about corporate governance and then presented the motivations and contributions of the study. This research first objective is to address the evolution of UK corporate governance characteristics. Also, this study's results complement previous studies on the antecedents of say-on-pay voting (e.g. Alissa, 2015; Conyon, 2016; Stathopoulos and Voulgaris, 2016) by identifying, for the first time, that the presence of female and foreign directors on remuneration committees impacts say-on-pay voting. This study also complements prior studies on the relationship between a diverse remuneration committee and CEO pay (Bugeja et al., 2015; Masulis et al., 2012) by investigating, as the first attempt in the UK, the relationship between the presence of female and foreign directors on remuneration committees and CEO pay. Also, this chapter describes the research question of this study and gives a brief description of the research methodology and a brief summary of the research findings. This chapter concludes with presenting the structure of the thesis.

Figure 1.1 Structure of the Thesis



CHAPTER II: DEVELOPMENT OF UK CORPORATE GOVERNANCE

2.1 Introduction

Since the 1980s, some UK companies have seen failures in their corporate governance schemes, such as Maxwell Communications and Polly Peck (Mallin, 2016). More specifically, the boards of these companies have failed to perform their roles effectively. In 1992, the UK's Cadbury Committee responded to these corporate governance failures by introducing the Code of Best Practice.

Since that time, many developments have helped improve corporate governance in the UK. As explained by Mallin (2016), the changes in the UK codes were motivated by worldwide business failures and financial scandals. The aim of this chapter is to review the development of UK corporate governance and say-on-pay voting.

This chapter is structured as follows: Section 2.2 presents a summary of the main developments in UK corporate governance; Section 3.3 discusses the role and structure of UK remuneration committees; Section 3.4 reports the developments of the say-on-pay voting in the UK and Section 3.5 concludes the chapter.

2.2 Development of UK Corporate Governance

UK corporate governance has undergone many reforms. This section presents the timeline of the UK Corporate Governance Code development.

Table 2.1 Summary of UK Corporate Governance Reforms (1992-2016)

Year	Name of Reform/Revision	Purpose/Key Changes
1992	Cadbury Report	- Separation of Chair and CEO roles. - Requirement for at least two independent directors on board. - Board audit committee's members should comprise independent non-executive directors.
1995	Greenbury Report	- Board remuneration committee's members should be comprised of independent non-executive directors. - Long-term performance related pay introduced.
1998	Hampel Report	- Reviews implementation of Cadbury and Greenbury reports.
1998	Combined Code	- Combined Code introduced. - Cadbury, Greenbury and Hampel reports' recommendations should be combined in one document known as the Combined Code (1998).
1999	Turnbull Report	- Recommends boards to review the system of internal control and risk management.
2001	Myners Report	- Reviews and addresses investment decision by institutional investors
2003	Higgs Report	- Recommends firms to include at least 50% of their board's directors from non-executive independent directors. - Introduces annual internal board evaluation.
2003	Tyson Report	- Reviews recruitment and development of non-executive directors.
2003	Smith Report	- Provides guidance on role and responsibilities of audit committee. - Focuses on independence of the external auditors and level of non-audit services provided.
2003	Combined Code (2003)	- Incorporated recommendations of Higgs, Tyson and Smiths reports into the Combined

		Code (2003).
2006	Combined Code (2006)	- Updates the Combined Code. - Board chairman if considered to be independent, upon appointment as chairman, might sit, but not as chair, in the remuneration committee.
2008	Combined Code (2008)	- Updates the Combined Code. - No constraint on directors chairing more than one FTSE100 firm. - Board chairman is permitted to be a member of the audit committee if the chairman is believed to be independent upon appointment.
2009	Walker Review	- Independent review on the corporate governance of banks and other financial institutions. - Risk committee establishment for FTSE100 banks and life insurance firms. - Recommends external board evaluation. - Board's chairman should be subject to annual re-election.
2010	Stewardship Code	- Introduced to enhance the quality of engagement between institutional shareholders and their investee firms.
2010	UK Corporate Governance Code (2010)	- Combined Code is renamed as the UK Corporate Governance Code. - The chairman should review the training and development needs of each director. - The evaluation of the board should be externally facilitated at least every three years.
2011	Davies Report	- Reviews the status of women underrepresentation on boards of FTSE 350 firms. - FTSE 350 firms should be aiming for minimum of 25% women representation by 2015.
2012	UK Corporate Governance Code (2012)	- Updates UK Corporate Governance Code (2010). - FTSE 350 firms should place the external audit contract out to tender.

		- Boards should give description of board's policy on diversity (gender diversity), any target they want achieve for this purpose and progress toward achieving this target. - Stewardship Code (2010) updated.
2014	UK Corporate Governance Code (2014)	- Updates UK Corporate Governance Code (2012). - Remuneration polices should be linked with company long-term firm performance. - More amendments on risk management.
2016	UK Corporate Governance Code (2016)	- Updates UK Corporate Governance Code (2014). - Includes changes on audit committees' guidance, the new Ethical Standard (2016) and the new Auditing Standards (2016) to fit with the European Union's Regulation and Directive.
2016	Hampton-Alexander Review	- Reviews women representation in senior leadership positions for FTSE 350 companies such as chair, senior independent non-executive and executive director - FTSE 350 firms should aim for a minimum of 33% of women representation on their corporate boards by 2020. - FTSE 100 firms should aim for a minimum of 33% of women representation on their executive committee by 2020.
2016	Green Paper: Corporate Governance Reform	- Suggests three areas for consultation, these are executive pay; enhancing the employee, customer and supplier voice at board level; and introducing corporate governance codes in the largest privately-held companies.

2.2.1 The Cadbury Report (1992)

In the 80s and 90s, the UK witnessed infamous corporate scandals, such as Polly Peck, BCCI and Maxwell (Mallin, 2016). As a result, the UK government responded to these corporate failures by forming a committee to look after the financial aspects of corporate governance and suggest recommendations to restore shareholders' confidence. The committee was launched in May 1991, chaired by Sir Adrian Cadbury, and included the FRC, the London Stock Exchange (LSE) and certain accountancy professions. The committee was officially known as the Committee on the Financial Aspects of Corporate Governance and its recommendations became known as the Code of Best Practice.

The main recommendations in the Code of Best Practice were as follows:

- No one should have powers of decision over other members of the board.
- The role of chairman and CEO should be separated and should not be held by the same person.
- At least two members of the board should be independent non-executive directors (INEDs).
- Firms should establish three key committees on their boards (audit, remuneration and nomination committees).
- The majority of the board audit committee's members should be from non-executive independent directors.

(Cadbury Report, 1992)

2.2.2 The Greenbury Report (1995)

The Greenbury Report was the result of public and shareholders' concerns about directors' high remuneration. At the beginning of 1995, the Confederation of British Industry (CBI) responded to these concerns and established the Study Group, chaired by Sir Richard

Greenbury, to resolve concerns about increasing directors' remuneration (Greenbury Report, 1995). As stated in the Greenbury Report (1995), the main goal of the report was 'to identify good practice in determining Directors' remuneration and prepare a Code of such practice for use by UK PLCs'.

The Greenbury Report (1995) developed various amendments to the Code of Best Practice in regard to directors' remuneration. The most important amendments are listed below:

- The majority of members on a remuneration committee should consist of non-executive directors.
- The members' names on a remuneration committee should be disclosed each year in the company's annual report.
- The chairman of a remuneration committee should attend the annual general meeting (AGM) to answer shareholders' concerns about directors' remuneration.
- Directors' remuneration should be linked to directors' long-term performance.

(Greenbury Report, 1995)

2.2.3 The Hampel Report and the Combined Code (1998)

The purpose of issuing the Hampel Report on January 1998 was to review the implementation of both the Cadbury and the Greenbury Reports and determine whether their original goals were being achieved. The Hampel Report (1998) stated that Cadbury and Greenbury had achieved their goals and there was no need for further revision in the Code of Best Practice. The Combined Code (2008) suggested that the three previous reports, namely the Cadbury, the Greenbury, and the Hampel reports, should be combined into one document known as the Combined Code.

The Hampel Report (1998) further replied to criticisms made about the Cadbury and Greenbury reports, such as they were too strict, in that, shareholders would be only focussed on the 'box-ticking' approach, rather than the intrinsic principles of the Code (Arcot, 2010). The Hampel Report (1998) argued that adherence to detailed guidelines in the Code of Best Practice did not necessarily lead to better performance, but adherence to the principles of the Code was more important (Short, 1999).

2.2.4 The Turnbull Report (1999)

The Turnbull Report (1999) was issued after the publication of the Combined Code (1998) to review the internal control system and risk management of companies. Specifically, this report states that the board should be the following:

> Responsible for the company's system of internal control. It should set appropriate policies on internal control and seek regular assurance that will enable it to satisfy itself that the system is functioning effectively. The board must further ensure that the system of internal control is effective in managing risks in the manner which it has approved. (Turnbull Report, 1999)

In addition, the Turnbull Report (1999) emphasised the importance of ensuring a good quality of financial reporting by stating the following:

> Effective financial controls, including the maintenance of proper accounting records, are an important element of internal control. They help ensure that the company is not unnecessarily exposed to avoidable financial risks and that financial information used within the business and for publication is reliable. They also contribute to the safeguarding of assets, including the prevention and detection of fraud.

2.2.5 The Myners Report (2001, 2004 and 2008)

In 2000, Her Majesty (HM) Treasury Office expressed its concern that institutional investors only invest in publicly listed companies and avoid investing in medium and small companies. In 2001, the Myners Report (2001) stated that investment decisions by institutional investors should be 'rational, well-informed, subject to the correct incentives and as far as possible, undistorted'.

In 2004, the HM Treasury published a revision of the Myners Report's progress achieved thus far by identifying the following deficits:

- Institutional investors' boards are still lacking the sufficient skills and expertise to fulfil their duties.
- There is still a 'lack of clarity of respective roles of trustees and their advisers'.
- There is still a lack of investment time horizons and lack of shareholders engagement.
- There is still poor disclosure quality identified in the implementation of the Myners Report (2001) principles.

Therefore, the new update of the Myners Report (2004) advised institutional investors' trustee boards to address the lacking areas identified by the review. Again, in 2008, the National Association of Pension Funds (NAPF) were asked by the UK government to further review the progress of the implementation of the Myners Report (2001) (Myners Report, 2008). The NAPF's review reported that institutional investors' board trustees made excellent progress towards achieving the core principles of the Myners Report, especially in the areas of 'improving trustee knowledge and understanding; strategic asset allocation; utilising expert advice; adopting appropriate benchmarks, transparency and reporting and, for larger schemes, activism and engagement' (Myners Report, 2008). Nevertheless, the new update of the Myners Report (2008) identified other lacking areas, such as that trustees, especially fund managers, have been found to be reluctant to evaluate their performance, and advised institutional investors to make further improvement on these areas.

2.2.6 The Higgs Report (2003)

Another financial crisis occurred between 2000 and 2002. The advance of technology and Internet allowed dot.com companies to grow faster than ever and this growth was

accompanied by a huge demand on dot.com companies' equities, which resulted in a large bubble in the stock markets (Kirkpatrick, 2009). As a result, in 2002, one of the dot.com companies, WorldCom, collapsed. During the period from 2001 to 2002, the world saw the collapse of Enron (Kirkpatrick, 2009). These events or crises created more concerns about the effectiveness of corporate governance codes. For example, the International Corporate Governance Network (ICGN, 2009) issued a statement on the global financial crisis and its relationship with the current corporate governance practice. The ICGN (2009) reported a number of concerns related to corporate governance such as enhancing shareholder rights, strengthening boards and directors' remuneration. In addition, the Organisation for Economic Co-operation Development (OECD, 2009) issued a report titled 'The Corporate Governance Lessons from the Financial Crisis'. Their report concluded that 'the financial crisis can be to an important extent attributed to failures and weaknesses in corporate governance arrangements' (OECD, 2009).

As a result of the collapses of Enron and dot.com companies in the US, the UK decided to review its corporate governance structure and assigned Derek Higgs to review the status of the corporate governance in the UK (Dewing and Russell, 2003). According to Jones and Pollitt (2004), the focus of the review was related to non-executive directors (their effectiveness, independence, relationships with institutional investors and remunerations). Thus, the Higgs Review provided various recommendations on 20 January 2003.

The most notable recommendations related to board evaluation (all directors should be evaluated at least once a year), board commitment (disclosure of number of meetings and directors' attendance in the annual report), non-executive director tenure limit and professional development of directors (induction and training programmes) and stated that CEOs should not become the chairman of the same company, executive directors should not hold more than one directorship of the FTSE 100, nomination committee should be chaired

by non-executive directors and senior independent should be available to shareholders (Dewing and Russell, 2003; Mallin, 2016).

However, the Higgs Review instigated heated debates from the CBI and the Institute of Directors, in that, some of the new recommendations were seen as unduly prescriptive (Dewing and Russell, 2003; Jones and Pollitt, 2004). This led the CBI to conduct a study taking the views of chairmen on the recommendations of the Higgs Review (Jones and Pollitt, 2004). Most of the surveyed chairmen of the FTSE 100 firms disagreed with certain recommendations, such as the new role of the senior independent director and chairmanship of the nomination committee by only non-executive directors and that CEOs should not become the chairman of the same company (Jones and Pollitt, 2004).

2.2.7 The Tyson Report (2003)

After the publication by the Higgs Review of the 'Role and Effectiveness of Non-Executive Directors' in January 2003 and ordered by the Department of Trade and Industry, a group headed by Professor Laura Tyson from the London Business School conducted a report titled, 'Recruitment and Development of Non-Executive Directors'. Their report concluded with three recommendations:

- The selection process of non-executive directors should be rigorous and transparent.
- Companies should invest more on evaluation and training of all board members.
- The selection process of non-executive directors should consider greater diversity in the backgrounds, experience, age, gender, ethnicity and nationality, but with broader research and proper measurement.

(Tyson Report, 2003)

2.2.8 The Smith Report (2003)

Motivated by the collapses of Enron and dot.com companies in the US and within the period of the Higgs Review, the Smith Review was assigned by the FRC to review the current status of audit committees (Dewing and Russell, 2003). The Smith Review (2003) published its report simultaneously with the Higgs Review on 20 January 2003. The Smith Report recommended that at least three INEDs should be on an audit committee, with at least one of them holding recent and relevant financial experience. Additionally, the Smith Report (2003) recommended that the audit committees should have the charge of indorsing an external auditor to the board and to shareholders.

2.2.9 The Combined Code (2003)

The FRC reacted to critiques made about the Higgs Review (2003) and amended some of recommendations as follows: first, a chairman can chair the nomination committee; second, non-FTSE 350 firms should not follow the role of that at least half of the board should be from independent directors and third, no limit should be placed on the tenure of non-executive directors (Jones and Pollitt, 2004). In addition, Mallin (2016) illustrated that as an alternative of affirming that no one of non-executive directors should sit on all board sub-committees, the new combined code detailed that ‘undue reliance’ should not be put on a specific person.

All these amendments to the Higgs Review were included in the Combined Code (2003), which was published on July 2003. Moreover, the Combined Code (2003) included the recommendations for both the Higgs and Smith Reviews (Dewing and Russell, 2003).

2.2.10 The Combined Code (2006)

The FRC published another edition of the Combined Code in June 2006. There were slight changes made to the Combined Code, including that a board chairman, if considered to be

independent upon appointment as chairman, might sit, but not as chair, on the remuneration committee; companies should facilitate a 'vote withheld' choice on proxy appointment forms to give shareholders the alternative to withhold their vote; and companies are recommended to disclose the information of proxies blocked on their website (Mallin, 2016).

2.2.11 The Combined Code (2008)

In 2007, the FRC conducted a review on the status of the Combined Code. This review indicated that the Combined Code had enough support and continuing achieving good results in governing listed firms (Mallin, 2016). However, the new edition of the Combined Code (2008) included two changes: first, there would be no constraints on directors chairing more than one FTSE 100 firms and second, a board's chairman is permitted to be a member of the audit committee if the chairman is believed to be independent upon the appointment.

2.2.12 The Walker Review (2009)

The global financial crisis of 2007 came with devastating consequences to all levels of the world's economy. Nordberg and McNulty (2013) stated that the recent global financial crisis was a continuation of insufficiency of corporate governance. The government of the UK, represented by the FRC, asked Sir David Walker to conduct an independent review on the corporate governance of banks and other financial institutions. Some of the issues tackled by the Walker Review were mainly related to the banking industry but also touched other industries.

The Walker Review mainly reviewed five areas: remuneration, risk, board composition, qualification and accountability and institutional shareholders. The key recommendations were summarised as follows:

- FTSE 100 major banks and building societies should reveal the number of employees earning over £ 1 million.

- Remuneration committees' remit should be improved, and its chair should be subject to re-election if the remuneration report fails to secure 75% support.
- Boards of FTSE 100 banks and life insurance firms must establish a risk committee on their boards.
- Boards' chairs should be subject to annual re-election.
- Non-executive directors should give more time commitment to the board.
- There should be additional qualifications, training and development programme requirements for board of directors, especially financial qualifications.
- External evaluation of the board and sub-committees should be done every two to three years.
- A new Stewardship Code for institution investors should be issued.

(Walker Review, 2009)

2.2.13 The Stewardship Code (2010)

The Stewardship Code is a set of principles released in 2010 by the FRC directed to institutional investors who hold voting rights in the UK's publicly listed firms. The main goal of the Stewardship Code (2010) was to improve the engagement between institutional investors and their investee companies to enhance and protect shareholders' interests. The main principles of the Stewardship Code (2010), as reported by the FRC (2010), that institutional investors were to adhere to are listed below:

- Institutional investors should disclose their policies on how they will discharge their stewardship responsibilities.
- Institutional investors should have a robust policy on managing conflicts of interest in relation to stewardship. This policy also should be publicly disclosed.
- Institutional investors should monitor their investee companies.

- Institutional investors should establish clear guidelines on how and when they will escalate their activities as a method of protecting and enhancing shareholder value.
- Institutional investors should be willing to act collectively with other investors where appropriate.
- Institutional investors should have a clear policy on voting and disclosure of voting activity reports periodically on their stewardship and voting activities.

The code adopts the same *comply or explain* approach used by the UK Corporate Governance Code. Each year, institutional investors were meant to publish a report on their companies' websites that disclosed a full explanation of how the principles of the Stewardship Code had been met and provide an explanation if some of the Stewardship Code's principles had not been complied with.

2.2.14 The UK Corporate Governance Code (2010)

As the number of foreign investors and foreign companies listed in the UK stock exchange increased over the time, the FRC announced that the Combined Code would be changed to the UK Corporate Governance Code. The new name of the Code was considered to be clearer than the previous code name for foreign investors and companies (FRC, 2010). The new code of corporate governance was published on June 2010.

The new code included four new main principles as compared to the Combined Code 2008, and these principles are summarised below:

- The responsibility of the board's chairman should be in leading the board.
- The role of non-executive directors should be in challenging and developing strategy.

- The board of the company should have a balance of skills, experience, independence and knowledge of the company.
- Board directors should assign sufficient time to discharge their responsibilities effectively.

(UK Corporate Governance Code, 2010)

In addition, there were a number of new provisions added to the new code, which were as follows:

- The chairman should agree and regularly review the training and development needs of each director.
- The evaluation of the board of FTSE 350 companies should be externally facilitated at least every three years, and any other connections between the facilitator and the company should be disclosed.
- The annual report should include an explanation of the company's business model.

(UK Corporate Governance Code, 2010)

2.2.15 Davies Reports (2011, 2012, 2013, 2014 and 2015)

After many concerns about the slow progress of gender diversity in UK plc boards, the UK government assigned Lord Davies of Abersoch to commence an independent review of the current number and position of female directors on UK corporate boards. Specifically, the aim of the review was to find obstacles that prevented women from reaching the boardrooms and make recommendations for the government and FTSE 350 firms about what they should do to increase female representation on boardrooms (Davies Report, 2011).

Lord Davies (2011) stated that 'although women tend to be very successful at university level and in their early careers level, in 2010 women represent only 12.5% and 7.8% of the total directors of FTSE 100 and FTSE 250 companies, respectively'. Moreover, he added the following:

> …during the course of this review some people told us that the only way we could make real change in increasing the number of women on boards was by introducing quotas. They said that other routes have already been tried, but women still remain a small minority on UK boards. Many other people told us that quotas would not be their preferred option as they did not want to see tokenism prevail. On balance the decision has been made not to recommend quotas. (Davies, 2011)

The Davies Report was ready by February 2011 and included several recommendations to improve the inclusion of women on UK boards of FTSE 350 firms, which are listed below:

- All chairmen of the FTSE 350 firms should set out a percentage of female representation on their boards that they aim to achieve by 2013 and 2015.
- FTSE 100 firms should achieve at least 25% of female representation on their boards by 2015.
- FTSE 350 firms should disclose in their annual reports the percentage of women on their boards, number of women in senior management positions and total number of women in their companies.
- The FRC should revise the UK Corporate Governance Code to include a policy regarding gender diversity. This policy should include measurable objectives for implementing this policy. Also, this policy and its objectives should be disclosed in the annual report.
- Chairmen of FTSE 350 companies should disclose all relevant information about their recruitment process and how it addresses diversity.
- The steering committee of the Davies Report should meet every six months to discuss the progress in implementing these recommendations.

(Davies Report, 2011)

Subsequent Davies Reports (2012, 2013, 2014 and 2015) reviewed progress of implementing the Davies Report (2011)'s recommendations on women representation on UK corporate boards. For example, the Davies Report (2015) has shown that FTSE 100 boards are 'well on its way to achieving the 25% target' by end of 2015 and more specifically, FTSE 100 boards have achieved 23.5% of women representation in 2015.

2.2.16 The UK Corporate Governance Code and Stewardship Code (2012)

The FRC conducted consultations and updates on audit committees, gender diversity and the Stewardship Code. These consultations and updates were incorporated into the new versions of the UK Corporate Governance Code (2012) and Stewardship Code (2012). Changes to the UK Corporate Governance Code (2012) included the following:

- FTSE 350 firms should place the external auditors' contract out to tender at least every ten years.
- Audit committees should supply shareholders with sufficient information on how the board of directors discharge their responsibilities and how they have evaluated the effectiveness of the external audit process.
- FTSE 350 firms' boards should give a full description of their gender diversity policy, their target and the progress achieved towards this policy.

Changes made to the Stewardship Code (2012) included the following:

- A full description of the specific responsibilities of asset managers and investment activities they have chosen to outsource.

- Institutional investors should explain more clearly how they manage conflicts of interest, the circumstances in which they will take part in collective engagement with their investee firms and the use they make of proxy voting agencies.
- To provide greater assurance to their clients, asset managers are encouraged to have the processes that support their stewardship activities independently verified.

2.2.17 The UK Corporate Governance Code (2014)

After two years, the FRC, once again, announced a new update to the UK Corporate Governance Code (2014) on 17 September 2014. In this regard, the FRC suggested a number of recommendations in the new code:

- FTSE 350 boards should place greater importance on ensuring that remuneration policies are geared towards the long-term success of their companies.
- FTSE 350 boards should put in place measures that enable them to recover or withhold variable pay when appropriate to do so, and they should consider appropriate vesting and holding periods for deferred remuneration.
- FTSE 350 boards should explain when publishing voting results on remuneration reports (say-on-pay) how they intend to engage with shareholders when a significant percentage of them have voted against the remuneration report.
- FTSE 350 boards should robustly assess their principal risks and explain how they are being managed or mitigated.
- FTSE 350 boards should state whether they believe they will be able to continue in operation and meet their liabilities, taking into account their current position and principal risks.

- FTSE 350 boards should monitor their risk management and internal control systems and, at least once a year, perform a review of their risk management and internal control systems' effectiveness and report the results in the annual report.

(UK Corporate Governance Code, 2014)

2.2.18 The UK Corporate Governance Code (2016)

The new revision of the UK Corporate Governance Code was published in June 2016. The new code was amended to fit the new European Union's regulations and directive. Specifically, the updated code included changes on audit committees' guidance, the new Ethical Standard (2016) and the new Auditing Standards (2016). The changes regarding audit committees included the following:

- The head of the internal audit, accompanied by the finance director and external audit partner, should be invited regularly to attend meetings of the audit committee.
- The audit committee should provide clear disclosure about how they select external audit tenders.
- The audit committee should plan regular meetings with shareholders.
- The audit committee should explain how it assesses the effectiveness of the internal audit.

(UK Corporate Governance Code, 2016)

2.2.19 Corporate Governance Reforms: Green Paper (2016)

On 29 November 2016, the Department of Business, Energy and Industrial Strategy (BEIS, 2016) created a consultation paper (or Green Paper) seeking views and opinions on how to improve the current corporate governance regime. The consultations were closed on 17

February 2017 and are currently under analysis[2]. The BEIS (2016) identified three areas for consultations: executive pay; enhancing the employee, customer and supplier voices on boards and strategies for implementing the corporate governance code in the largest privately held companies. Under each area, a range of recommendations were suggested, and the following sub-sections provide more details.

i. Executive pay

As reported in the BEIS (2016), the first area of the Green Paper asked for views on the following:

- Strengthening shareholder voting rights.
- Encouraging greater shareholder engagement with executive pay
- Strengthening the role of remuneration committees, including improved engagement with shareholders and employees.
- Further improving transparency on executive pay.
- Improving the effectiveness of long-term pay incentives.

Recommendations for strengthening shareholder voting rights included a shareholder binding vote on the annual remuneration report[3] and requiring companies to set an upper threshold for total annual remuneration for each executive director. As for encouraging greater engagement with executive pay, recommendations included establishing shareholder committees to engage with the arrangement of executive pay and imposing mandatory disclosures of fund managers at the AGM. To further improve the role of remuneration committees, the BEIS (2016) proposed that remuneration committees must consult shareholders and other stakeholders before preparing their executive remuneration policies. As for executive pay

[2] At time of writing this thesis.
[3] Currently, shareholders have a binding vote on remuneration policy (but not the annual remuneration report).

disclosure, the BEIS (2016) suggested that the annual remuneration report should contain pay ratios (comparing CEOs pay with that of other employees) and disclose bonus targets for each director.

ii. Strengthening employee, customer and supplier voices

Recommendations suggested by the BEIS (2016) for strengthening employee, customer and supplier voices included the establishment of a stakeholder advisory panel or designating a non-executive director to ensure that the opinions and views of the company stakeholders are heard by the board or appointing an individual stakeholder to represent other stakeholders on the board. In addition, the BEIS (2016) proposed new reporting requirements to enhance stakeholder engagement.

iii. Corporate governance in the largest privately held companies

Large privately held companies had less formal corporate governance than publicly listed companies. Therefore, the BEIS (2016) suggested that these companies should adhere to standards of corporate governance and apply financial reporting standards more reliably.

2.2.20 The Hampton-Alexander Review (2016)

The Hampton-Alexander Review (2016) is a continuation of the previous work of the Davies Reports to enhance the role of women in UK boardrooms. The Hampton-Alexander Review (2016) acknowledged that Davies Reports achieved their goal by stating that 'the voluntary business-led framework to improve the number of women at the top of British business is working and it is time to extend the focus beyond the boardroom'. Thus, the main focus of the Hampton-Alexander Review (2016) was to improve female representation in senior leadership positions for FTSE 350 companies, such as chairs, senior non-executive independent directors and executive directors. There were several recommendations made by the Hampton-Alexander Review, which are summarised as follows:

- By 2020, all FTSE 350 firms should aim to have a minimum of 33% women on their corporate boards.
- All FTSE 350 companies should increase the number of women in board roles including chairs, senior independent directors and executive directors.
- All FTSE share companies should address gender imbalance at their corporate boards.
- All FTSE 350 firms' CEOs should address under-representation of women on the executive committee.
- By 2020, all FTSE 100 companies should aim to have at least 33% women included across their executive teams.
- At least once a year, the chair of the nomination committee should review the progress of increasing the number of women on the executive committee.
- FTSE 350 firms should publish the details regarding the number of women on executive committees in their annual reports.
- The FRC should amend the UK Corporate Governance Code to include the previous recommendations.
- All institutional investors should assess disclosure and progress on gender balance on their executive teams for their FTSE 350 investee firms.
- Institutional investors should also have a voting policy on gender balance.

2.3 Structure and Role of the Remuneration Committee in the UK

Most decisions related to directors' remuneration are designed and monitored by the board's remuneration committee (Daily et al., 1998). The UK Corporate Governance Codes (e.g., 2010, 2012, 2014 and 2016) have specified the basic structure and main duties of the

remuneration committee. This section discusses the structure and role of the remuneration committee in the UK corporate governance context.

2.3.1 Remuneration committee structure

The Cadbury Report (1992) recommended, for the first time, that all publically listed companies should establish a remuneration committee to look after the arguments and design of executive directors' remuneration packages. The UK Corporate Governance Codes (e.g. 2010, 2012, 2014 and 2016) recommended the size and composition of the remuneration committee by stating that 'the board should establish a remuneration committee of at least three, or in the case of smaller companies two, independent non-executive directors' (UK Corporate Governance Code, 2016). Also, the codes reported that the board chairman can act as a member, but not as a chair, of the remuneration committee. In addition, the UK Corporate Governance Codes (e.g. 2010, 2012, 2014 and 2016) recommended that a remuneration committee should 'also be responsible for appointing any consultants in respect of executive director remuneration' (UK Corporate Governance Code, 2016).

2.3.2 Role of the remuneration committee

The main role of the remuneration committee is to set fair executive directors' remuneration schemes. More specifically, the UK Corporate Governance Codes (e.g. 2010, 2012, 2014 and 2016) recommended that these remuneration packages 'should be designed to promote the long-term success of the company' and 'performance-related elements should be transparent, stretching and rigorously applied' (UK Corporate Governance Code, 2016).The following summarises the basic responsibilities of the remuneration committee:

- Review and design the directors' remuneration policy[4] (at least every three years) for the executive director and other senior management and later submit it to shareholders for voting (binding vote).
- Review and design the annual directors' remuneration report[5] that includes details of each directors' pay (including chairman pay) and later seek approval from shareholders during the AGM (through a non-binding vote).
- Review and determine the terms of employment and remuneration including recruitment and termination.
- Review the remuneration committee's performance.

2.4 Developments of the Say-on-Pay Approach in the UK (2002, 2013 and 2016)

After decades of excessive executive remuneration and rewards for failure, investors and policymakers have called for a reform of executive pay. Whilst the UK has seen many reforms relating to executive remuneration since the Cadbury Report (1992), including the establishment of the remuneration committee (Cadbury Report, 1992), the independence of the remuneration committee (Greenbury Report, 1995), the say-on-pay approach (Directors' Remuneration Report Regulations, 2002), the revised say-on-pay approach (Enterprise and Regulatory Reform Act, 2013) and the new proposed reforms on the say-on-pay approach and the remuneration committee (BEIS, 2016), there remains a widespread public perception that executive directors and, in particular, CEOs are too generously remunerated.

In 2002, the UK was the first country to introduce a legislation requiring all UK-quoted companies to grant their shareholders an advisory and non-binding vote on executive remuneration. After concerns emerged that an advisory shareholder vote on the remuneration report was not enough, the UK Department of Business, Energy and Industrial Strategy

[4] See more details about remuneration policy on "Developments of the Say-on-Pay" in the following section.
[5] See more details about remuneration report on "Developments of the Say-on-Pay" in the following section.

(DBEIS, 2013) created amendments to the remuneration report, recommending that the new remuneration report contain the following three items: a statement by the chair of the remuneration committee, a remuneration policy and a remuneration report (see Table 2.2 for description and requirements of remuneration policy and remuneration report). Remuneration policy is subject to a binding shareholder vote and should state the directors' projected remuneration for the coming three years, whereas the remuneration report should provide details of the directors' remuneration on an annual basis and be subject to an advisory shareholder vote (Mallin, 2016), see Table 2.3 for a typical example of shareholder voting. In 2016, the UK again proposed new changes to reform the current corporate governance regime, including the say-on-pay approach and the remuneration committee (BEIS, 2016). The new proposed change for the say-on-pay approach was that all or part of the remuneration report should be subject to an annual binding shareholder vote. Furthermore, the reform proposals included several suggestions, such as a suggestion to establish a shareholder committee to engage with executive remuneration arrangements. Additionally, other suggestions related to the need for more disclosures in the remuneration policy and the annual remuneration report, such as reporting pay ratios and bonus targets.

Over the last decade, the say-on-pay practice has been adopted across many countries, including Australia, Japan and Sweden in 2005, Germany in 2010, the US and Italy in 2011, Belgium and Canada in 2012 and France in 2014. Say-on-pay votes have pros and cons. Opponents believe that the say-on-pay approach may disrupt management and the board and undermines the board's authority (Bainbridge, 2008; Deane, 2007). Furthermore, Bainbridge (2008) contended that shareholders ignore the say-on-pay practice, as it is non-binding. However, advocates of the say-on-pay approach argue that this practice may reduce agency costs between management and shareholders and, consequently, lead to better and more reasonable executive remuneration schemes (Davis, 2007). Thus, a say-on-pay vote works as

an external control, enabling shareholders to prevent or reduce excessive executive remuneration.

Table 2.2 Description and Comparison of Remuneration Report and Policy

	Remuneration report	Remuneration policy
Type of vote	Mandatory and non-binding.	Mandatory and binding.
How often	Every year.	Every three years if policy is kept unchanged, otherwise every year.
Requirements	• Total sum of remuneration for each director. • Full description of performance compared to metrics for annual and long-term incentives paid in the year. • Total pension entitlements. • Existing payments of the current year. • Full description of variable remuneration awarded in the year. • Total shareholdings of directors. • Graph comparing company performance and CEO remuneration. • Details about consultants who provide advice to the remuneration committee.	• Payment policy table. • Information on employment contract. • Scenarios showing what directors would get paid for performance that is above, on and below target. • Information on changes which have taken place in company profits and dividends and in the company's overall spending on remuneration. • The principles on which existing payment is made.

Table 2.3 Typical Example of Shareholder Voting (BP Plc, 2015)

Resolution No.	Resolution Narrative
1	To adopt the report & accounts for the year ended 31 December 2014
2	To approve the report on the implementation of the remuneration policy for the year ended 31 December 2014
3	To re-elect as a director, R Dudley
4	To re-elect as a director, B Gilvary
5	To re-elect as a director, P Anderson
6	To re-elect as a director, A Boeckmann
7	To re-elect as a director, F Bowman
8	To re-appoint Ernst & Young plc as auditors and to authorise the directors to determine their remuneration
9	To authorise the Board to offer a scrip dividend
10	To approve the 2015 Share Award Plan for employees below the board
11	To authorise the Company to make political donations to political parties and political organisations and to incur political expenditure
12	To approve a general authority to the directors to issue shares
13	To approve a general authority to the directors to dis-apply pre-emption rights on the issue of shares for cash

Resolution No.	For	Abstain	Against	For (%)	Abstain (%)	Against (%)	Turnout (%)
1	11,084,204,342	64,599,932	131,274,816	98.26%	0.57%	1.16%	61.77%
2	9,741,702,808	305,297,190	1,234,333,436	86.35%	2.71%	10.94%	61.78%
3	11,166,518,915	75,923,508	38,913,963	98.98%	0.67%	0.34%	61.78%
4	11,102,909,767	67,999,919	110,405,051	98.42%	0.60%	0.98%	61.78%
5	11,172,990,979	68,236,014	39,863,477	99.04%	0.60%	0.35%	61.78%
6	11,170,893,155	68,844,821	41,349,369	99.02%	0.61%	0.37%	61.78%
7	11,028,812,744	105,244,362	147,305,232	97.76%	0.93%	1.31%	61.78%
8	11,148,502,893	89,909,077	42,956,282	98.82%	0.80%	0.38%	61.78%
9	11,045,918,644	88,676,074	146,798,879	97.91%	0.79%	1.30%	61.78%
10	10,678,342,999	182,432,559	420,562,062	94.65%	1.62%	3.73%	61.78%
11	10,034,596,324	100,665,971	1,146,064,684	88.95%	0.89%	10.16%	61.78%
12	10,937,109,025	102,243,636	241,950,782	96.95%	0.91%	2.14%	61.78%
13	11,028,812,744	105,244,362	147,305,232	97.76%	0.93%	1.31%	61.78%

Shareholder Voting at BP Plc Annual General Meeting, April 2015. Data source: Manifest.

2.5 Conclusion

The main purpose of Chapter Two is to address the main stages of development of UK corporate governance and the say-on-pay approach. The evolution of UK corporate governance can be classified into three stages: the period after the 80s and 90s corporate scandals, the period after US corporate failures and the period after the global financial crisis of 2007.

The first phase of corporate governance reforms witnessed the issuance of the first document of the corporate governance code in the UK, which was the Cadbury Report (1992). Followed by the Greenbury Report (1995), Hampel Report (1998) and Combined Code (1998), respectively. The second phase saw the publication of the Higgs Report (2003) and Smith Report (2003). Phase three included important changes such as the issuance of the Walker Review (2009), Stewardship Code (2010), Davies Report (2011) and, most recently, Hampton-Alexander Review (2016).

In addition, this chapter reviewed the developments of the say-on-pay approach in the UK. The say-on-pay practice began in 2002 and gave shareholders a non-binding vote on directors' remuneration reports. In 2013, the say-on-pay approach was further amended by giving shareholders a binding vote on remuneration policies. Moreover, the new consultations of the BEIS (2016) suggested that firms give shareholders a binding vote on their annual remuneration report or form a shareholder committee to improve engagement in setting executive directors' remuneration packages. Furthermore, this chapter discussed the structure and role of the remuneration committee in the UK. The next chapter highlights the theoretical and empirical background of corporate governance.

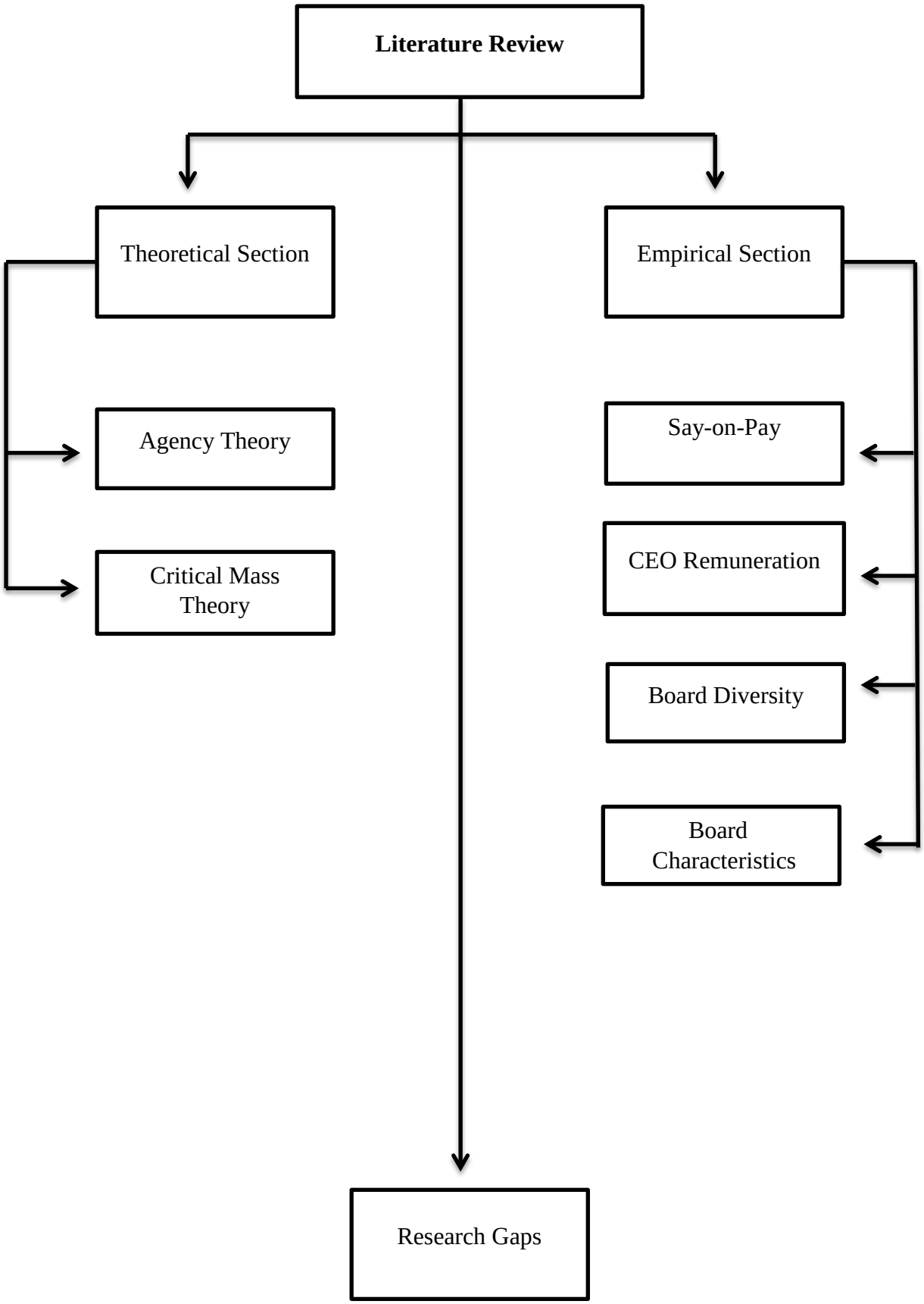
CHAPTER III: LITERATURE REVIEW—THEORETICAL AND EMPIRICAL BACKGROUND

3.1 Introduction

The previous chapter highlighted the evolution of corporate governance in the UK, including codes and guidance relating to the remuneration committee. Also, the previous chapter covered the background of the say-on-pay approach. The aim of this chapter is, therefore, to review the theoretical and empirical background of the say-on-pay approach, CEO remuneration, board diversity and corporate governance literature (see Figure 3.1 for structure of the literature review). In the theoretical section, a number of underlying theories used in previous studies to address corporate governance issues such as the relationship between shareholder and management or the interaction among say-on-pay, CEO pay, board diversity and other board attributes are discussed. These theories include agency theory, stakeholder theory, stewardship theory, resource dependence theory and critical mass theory. The second part of this chapter aims to present the most relevant literature related to shareholder say-on-pay practices, CEO remuneration, board diversity and other corporate governance characteristics. Finally, the third part of this chapter identifies some of the key gaps in research related to these topics.

The current chapter is structured as follows: Section 3.2 presents the theoretical background of corporate governance; Section 3.3 discusses the previous empirical literature; Section 3.4 reports research gaps and Section 3.5 concludes the chapter.

Figure 3.1 Structure of Literature Review



3.2 Theoretical Background of Corporate Governance

Theories and philosophies associated with the development of corporate governance have derived mainly from other disciplines such as economics, finance, accounting and law (Mallin, 2016). The development of corporate governance theories are a reflection of or depend on a country's culture, institutional factors and political and legal systems (Goergen, 2012), and some of these theories may be more relevant to some countries than others (Mallin, 2016). As stated in Chapter One, there are essentially two models that explain the development of corporate governance in any legal system: the stockholder model (or agency model) and stakeholder model. In the Anglo-American legal context, such as the UK and the US, the agency model is the dominate framework for explaining corporate governance regime and business law, in general (Goergen, 2012; Mallin, 2016).

This section addresses two main theories associated with this research, including agency theory and critical mass theory.

3.2.1 Agency theory

The agency theory is key in corporate governance, say-on-pay voting and CEO pay studies and is used as a means of addressing the relationship between management and shareholders. Cuomo et al. (2016) find that the agency theory is the most used theory in corporate governance studies. Jensen and Meckling (1976) produced one of the most important works that underpins the theory of agency. These researchers defined the agency theory as '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' (Jenson and Meckling, 1976). This statement might lead one to think that the execution of such a contract for managing the wealth of investors is the same as

managing a sole-proprietorship company, where the owner is the sole manager of the company (Hart, 1995).

However, agency relationships in public companies are complex (Tricker, 2009) due to separation of ownership and management, and it cannot be expected that the agent will be cautioned about the wealth of the principal in the same manner as that of the principal (Smith, 1776). Thus, there are many ways in which the agent may abuse the contract between him and the principal, such as seeking his own interests to increase his salaries or bonuses, and the agent may not take the same precautions against certain risks as the principal would take (Mallin, 2016). Moreover, information asymmetry between the principal and agent is another problem of agency relationships, in that, the agent might benefit more from privileged access to information about company operations than the principal does, since the principal has no direct intervention in company operations.

Fama and Jensen (1983) contended that the agency problem may worsen when there is not enough enforcement by the principal over the agent. Therefore, how can shareholders mitigate agency costs? There are many ways in which the shareholders can control the management of the company. One way is through establishing an incentive contract between management and shareholder (Shleifer and Vishny, 1997). These contracts could align managers' interests with those of shareholders. Jensen and Meckling (1976) stated that incentive contracts could use different methods, such as shareholders ownership, share options and a threat of termination if net income is low. However, incentive contracts may involve other problems, such as increasing the probability of self-dealing for the managers, when these contracts are negotiated with poor corporate boards (Shleifer and Vishny, 1997). For instance, some managers may assign themselves attractive incentives, such as receiving share options before the share price is likely to increase after good news. This problem has been empirically proven by Yermack (1997).

Another important effective way to reduce agency cost is through large shareholders (Shleifer and Vishny, 1997) or shareholders activism (Solomon, 2010). The power of large shareholders or shareholders activism can be exercised through voting at AGMs. For example, shareholders in AGMs can vote to include more independent directors to the board or vote in favour of a takeover. However, Shleifer and Vishny (1997) stated that the effectiveness of large shareholders depends on the level of legal protection where shareholders invest. Also, not all shareholders use their votes to influence management, especially individual investors.

Another aspect of shareholder activism is the takeover mechanism. This mechanism represents another means of reducing agency costs (Jensen and Ruback, 1983). As explained by Solomon (2010), if shareholders are not satisfied with their management, they can vote at AGMs in favour of a takeover. Indeed, this option is an effective way to restrain management, as they may be afraid that their positions will be taken. Additionally, shareholder resolution, which happens when shareholders gather as a lobby against a matter they do not like, can be a way of aligning management interests with shareholder interests (Solomon, 2010).

This research uses the agency theory to address research questions related to whether higher proportion of female directors on firms' remuneration committees have an impact on CEO remuneration and shareholders' dissent via say-on-pay voting (sub-questions 1). Prior studies of say-on-pay, building on the agency model, have argued that shareholders' dissent on the remuneration report is the result of high executive remuneration (e.g., Alissa, 2015; Conyon, 2016; Conyon and Sadler, 2010). The board of directors plays an internal role in mitigating such conflicts between agents and principals by monitoring and by advising management, for example, on strategic decisions (Fama and Jensen, 1983; Jensen and Meckling, 1976). Previous research has shown that female directors may be more independent (Adams, 2016)

and hence more effective monitors than male directors (Adams and Ferreira, 2009). Therefore, this research proposes that the presence of female directors on remuneration committees can improve the role of monitoring, thereby helping to align CEO remuneration with shareholders expectation and improving shareholder satisfaction with say-on-pay voting.

In addition, this research applies the agency theory to figure whether higher percentage of foreign directors on firms' remuneration committees have an influence on CEO remuneration and shareholders' dissent via say-on-pay voting (also, sub-questions 1). Previous studies stated that foreign directors could act as a 'double-edge sword' (Masulis et al., 2012). From one side, they can be beneficial to gain information about international markets and regulations, however they are found to be less effective monitors (Masulis et al., 2012).

3.2.2 Critical mass theory

Kanter (1977) first developed the critical mass theory in the corporate governance context. The critical mass theory has been widely used in legislative and political literature (Torchia et al., 2011). Kanter (1977) argued that minorities within a large, more dominating group tend be marginalised or seen as tokens. Due to their lower numbers, minorities begin to seem untrustworthy to the large, more dominating group, which, in turn, reduces their power in decision making (Kanter; 1977; Torchia et al., 2011). However, this tokenism perception towards minorities diminishes when the number of minorities grows to a certain threshold (critical mass). At this point, the minorities are no longer seen as tokens, more trust is gained and their influence on decision making increases (Konrad et al., 2008; Torchia et al., 2011).

Several recent studies have investigated the relationship between women on boards and firm outcomes using the critical mass theory. Specifically, the existence of three or more female directors on boards increases firm outcomes, whereas the inclusion of only one or two

women does not have the same impact (e.g. Joecks et al., 2013; Liu et al., 2014; Torchia et al., 2011).

The monitoring role of directors (suggested by agency theory) may not be effective on the board if it represented by a minority group (e.g. Joecks et al., 2013; Liu et al., 2014; Torchia et al., 2011). The minority group may be tokened or ignored on decision making (Torchia et al., 2011). Therefore, in addition to agency theory, this research uses critical mass theory. Specifically, research questions related to whether differentiating between firms with only one woman director on their remuneration committees and firms with two or more female directors can impact CEO remuneration and say-on-pay voting (sub-question 1). Also, this research utilises critical mass theory to investigate sub-question two which are related to whether differentiating between firms with only one foreign director on their remuneration committees and firms with two or more foreign directors can influence CEO pay say-on-pay voting.

3.3 Empirical Background: Previous Literature

This section addresses previous literature related to say-on-pay practices, CEO remuneration, board diversity (such as gender and nationality diversity) and board characteristics (such as board size, board independence and CEO duality).

3.3.1 Say-on-pay

Shareholder activism and the say-on-pay approach, specifically, have garnered attention from the public and academia (Stathopoulos and Voulgaris, 2015). Although studies on the say-on-pay approach are relatively new, this approach has made critical changes in corporate boards (Goranova and Ryan, 2014). Executive remuneration was one of the most key issues questioned by shareholder activists.

Many previous studies have investigated the factors leading to and consequences of shareholder activism (see Table 3.1 for the summary of these papers). Most of these papers were researched using the US market. Moreover, previous research on shareholder activism used different measures for shareholder activism; however, hedge fund activism was the most common measure among this literature.

There are many factors found to be related to shareholder activism, and firm size and performance and institutional ownership are among the most influential factors causing shareholders to intervene in their investee firms. Large firms are found to be more targeted by shareholder activism (e.g. Ertimur et al., 2011; Karpoff et al., 1996; Rehbein et al., 2004; Smith, 1996). One explanation may that shareholders found it difficult to monitor large firms (Goranova and Ryan, 2014; Jensen and Meckling, 1976).

Another explanation may be that large firms are more visible and more likely to attract attention from the public; therefore, shareholder activists may interfere with their large investee firms as a means of attracting more public support (Rehbein et al., 2004; Stathopoulos and Voulgaris, 2015). However, studies such as Brav et al. (2008) and Klein and Zur (2009), which used hedge funds to measure shareholder activism, found that hedge fund activists are less likely to interfere with large firms.

Additionally, firms with good performance are negatively related to shareholder activism (e.g. Brav et al., 2008; Edmans et al., 2013; Ertimur et al., 2011; Karpoff et al., 1996). This idea is consistent with the agency theory, in that, shareholders tend to interfere when firms perform poorly.

However, other research, such as Bizjak and Marquettee (1998) and Ferri and Sandino (2009), found an insignificant association between firm performance and shareholder activism. Moreover, institutional ownership is another important factor related to shareholder

activism (e.g. Bizjak and Marquettee, 1998; Brav et al., 2008; Karpoff et al., 1996; Smith, 1996).

The say-on-pay approach is another form of shareholder activism. Specifically, this form targets executive remuneration. The UK was the first country to introduce a mandatory non-binding shareholder vote on executive pay in late 2002 (Stathopoulos and Voulgaris, 2015; 2016). The main purpose of the say-on-pay approach is to promote transparency and accountability linkage to executive remuneration (Stathopoulos and Voulgaris, 2015; 2016). This focus was derived because of subsequent concerns about 'fat cat' remuneration and compensation for failure (Ferri and Maber, 2013).

Past research in shareholder activism has identified two strategies where shareholders might intervene in firm affairs; shareholders can use the exit strategy or the voice strategy (Stathopoulos and Voulgaris, 2015). For example, the exit strategy encompasses selling part or all of the shares of the company, and the voice strategy is accomplished through campaigns, memorandum of objection, calling for meetings or at the AGM. The say-on-pay approach is an example of the voice strategy.

Table 3.1 Previous Literature on Shareholder Activism

Study	**Sample/Period/Measure**	**Key results**
Bizjak and Marquettee (1998)	- US 1987-1993 - Poison pill proposals	Shareholder activism is positively related to institutional ownership, but negatively related to executive and blockholder ownership.
Brav et al., (2008)	- US 2001-2006 - Hedge fund activism	Hedge fund activism is positively related to institutional ownership and governance score, but negatively related to firm size and performance, and dividends.
Edmans et al., (2013)	- US 2005-2010 - Hedge fund	Hedge fund activism is negatively related to liquidity, leverage, R&D and firm

	activism	performance.
Ertimur et al., (2011)	- US 1997-2007 - Vote No Campaign	Vote No Campaign is positively related to board independence, CEO remuneration and firm size, but negatively related to CEO power and firm performance.
Ferri and Sandino (2009)	- UK 2003-2004 - Option expensing proposals	Shareholder activism is positively related to CEOs with more stock option and leverage, but negatively related to institutional ownership and option expense.
Karpoff et al., (1996)	- US 1986-1990 - Governance proposals	Shareholder activism is positively related to firm size, leverage and institutional ownership, but negatively related to firm performance.
Klein and Zur (2009)	- US 1995-2005 - Hedge fund activism	Hedge fund activism is positively related to profitability and liquidity, but negatively related to leverage.
Smith (1996)	- US 1987-1993 - CalPERS targets	Shareholder activism is positively related to firm size and institutional ownership

Many authors have reported pros and cons of the say-on-pay vote. In the view of opponents, say-on-pay votes may cause a disruption among management and the board and undermines the authority of the board (Bainbridge, 2008; Deane, 2007). Additionally, Kaplan (2008) and Bainbridge (2008) contended that shareholders ignore say-on-pay practice, as it is non-binding. However, advocates of say-on-pay votes argue that this practice may reduce the agency costs between management and shareholders and, consequently, lead to better and reasonable executive remuneration schemes (Davis, 2007). Thus, say-on-pay votes work as an external control for shareholders to use to prevent or reduce excessive executive remuneration.

Previous research on say-on-pay voting has focused mainly on two streams of research (see Table 3.2 for summary). The first stream is the market reaction to say-on-pay voting, mainly researched using event study methodology (see Table 3.2, Panel A). The second stream of say-on-pay voting research investigated the antecedents of say-on-pay voting (see Table 3.2, Panel B).

A number of studies have examined the impact of say-on-pay voting on firm share price (market reaction). The results from these studies, however, are not inconclusive. For instance, Ferri and Maber (2013) used data from the UK FTSE 350 over a period between 2003 and 2008 and documents a positive stock market reaction to the say-on-pay proposal for firms with controversial CEO pay practices and, more specifically, with weak penalties for poor performance. This result is, in fact, coherent with the perception that shareholders perceive say-on-pay voting as a monitoring mechanism for their investee firms, especially those with poor performance.

Similarly, in the US, Cai and Walking (2011) used an event study methodology and found that when say-on-pay regulation was passed by the House of Representatives in April 2010, the stock prices of firms with excessive CEO pay and firms with weak corporate governance responded positively to the proposal of say-on-pay voting.

Similarly, but with boarder sets of governance legislation, Cuñat et al. (2012) investigated different types of governance proposals (including the say-on-pay proposal) and stock market prices using a data set from the US S&P 1500 and S&P 500 widely held firms from 1997 to 2007. These researchers found that passing legislative proposals leads to significant positive abnormal stock returns.

In contrast, Wayner and Wenk (2015) used a database of 225 Swiss companies and found a negative market reaction towards say-on-pay proposals. However, with a wider set of

corporate governance legislative proposals, including the say-on-pay proposal, Larcker et al. (2011) used 4,856 US firms from 2006 to 2008 and found no consistent reactions between different corporate governance legislative events and firms' stock prices.

Overall, it is clear that the results from this literature are mixed, but most of them support say-on-pay voting as having a positive reaction on firms' share prices. Hence, this finding may also support the argument contending that say-on-pay voting improves monitoring and reduces agency costs (Davis, 2007).

The second stream, research on the antecedents of say-on-pay voting, has investigated whether higher say-on-pay dissent voting can reduce or change controversial executive remuneration (see Table 3.2, Panel B). For instance, Conyon and Sadler (2010) used all the UK publicly listed firms in the manifest database from 2002 to 2007 and found that the average dissent voting on executive pay for UK firms is only 10%. Regarding the antecedents of say-on-pay voting, Conyon and Sadler (2010) found that firms with low firm performance (low return on assets) and high ownership concentration tended to have negative impacts on say-on-pay dissent voting. However, they also found limited evidence that high say-on-pay dissent voting can reduce executive remuneration the following year.

Likewise, Carter and Zamora (2008), in the UK, used FTSE 350 firms from 2001 to 2006 to investigate the antecedents of say-on-pay voting and address the impact of shareholder say-on-pay votes on executive compensation. Carter and Zamora (2008) reported that firms with high shareholder dissent voting via say-on-pay votes are more likely to have higher executive remuneration and lower firm performance. However, in contrast to Conyon and Sadler, Carter and Zamora (2008) found evidence that firms react to the past high shareholder dissent voting by changing the extreme executive remuneration the following year.

Moreover, in the UK, Gregory-Smith et al. (2013) found that board independence and the number of non-executive directors on the boards of FTSE 350 firms over the period of 1998–2012 have no impact on shareholder dissent voting via say-on-pay. However, they did find evidence that higher CEO remuneration and lower firm performance (stock return) led to higher say-on-pay dissent voting. Remarkably, Gregory-Smith et al. (2013) reported that after the financial crisis of 2007, companies become more response to higher shareholder dissent voting (dissent >10%) than before the crisis by decreasing their CEOs remuneration.

Additionally, Ferri and Maber (2013), in the UK, found that firms with higher shareholder dissent voting (≥20%) via say-on-pay voting responded by removing the controversial CEO remuneration the following year. Remarkably, these researchers reported that firms with lower shareholder dissent voting (≤10%) tended to shorten their notice period of directors' remuneration reports to avoid high dissent voting.

More recently, Alissa (2015) also examined the determinants of say-on-pay dissent voting and the impact of say-on-pay dissent voting on extreme executive remuneration in the UK FTSE 350 between 2002 and 2012. At first, Alissa (2015) did not find evidence that say-on-pay votes reduce excessive CEO remuneration. However, when Alissa (2015) included the firm performance as a moderator in his equation, he found evidence that say-on-pay votes tended to reduce CEO high remuneration when firm performance was low. This finding, in fact, also supposed that shareholders tended to link executive remuneration with firm performance; thus, when firm performance is low, shareholders tend to put more pressure on executive payments.

Also, recently in the UK, Stathopoulos and Voulgaris (2016) investigated the relationship between shareholder investment horizons (short-term investors vs. long-term investors) and say-on-pay voting patterns using data from FTSE 350 companies from 2003 to 2011. These

researchers found that long-term investors tended not to vote against CEO remuneration, whereas short-term investors were more likely to vote against CEO pay, especially when these remunerations were excessively high. This finding may imply that 'the role of long-term shareholders in facilitating effective monitoring and engagement prior to the publication of the proposals as opposed to colluding with managers' (Stathopoulos and Voulgaris, 2016).

In the US, a number of studies examined the antecedents of say-on-pay voting and investigated the impact of higher say-on-pay dissent voting on executive remuneration. These studies found the impact increased after the Dodd-Frank Act of 2010, which made non-binding say-on-pay voting mandatory. For example, Cotter et al. (2013) used data from 1,497 US firms in 2011 and found that firms with higher say-on-pay dissent voting reduced their high executive remuneration the following year.

Likewise, Balsam et al. (2015), in the US, using data from 981 firms from 2009 to 2010, reported that firms with higher shareholder dissent voting via say-on-pay votes reduced their CEOs remuneration and made them more performance-based the following year.

Furthermore, Kimbro and Xu (2016) documented that firms with high say-on-pay dissent voting were more likely to have higher CEO remuneration, greater institutional ownership, larger firm size, higher stock price volatility, less CEO ownership and lower firm performance. In addition, Kimbro and Xu (2016) found that companies with higher shareholder dissent voting tended to reduce their excessive CEO remuneration, and the boards of these firms responded to say-on-pay votes by reducing the growth of executive remuneration the following year. Kimbro and Xu (2016) used a sample of 2,384 US firms from 2011 to 2012.

Conyon (2016) also investigated the antecedents and implications of shareholder dissent via say-on-pay voting in the US from 2010 to 2012. Conyon (2016) revealed that higher CEO

remuneration, lower firm performance, larger board size, CEO duality, and greater institutional ownership were among the most antecedents of higher shareholder dissent voting. However, Conyon (2016) found that board independence had an influence on say-on-pay voting. Furthermore, Conyon (2016) reported that firms were more likely to reduce their CEOs remuneration after high shareholder dissent voting.

In contrast, Brunarski et al. (2015) found no evidence that the Dodd-Frank Act of 2010, which made non-binding say-on-pay mandatory in the US, had no evidence of influence on executive CEO remuneration. However, this study possibly lacked the long-term effects of this legislation, as they only investigated this relationship in one period (2010).

Regarding other countries, Correa and Lel (2016) addressed shareholder dissent via say-on-pay voting using multinational data of companies from 38 countries over a period from 2001 to 2012. Correa and Lel (2016) found that higher CEO pay and weak corporate governance practices played significant roles in shaping say-on-pay voting in these countries. Moreover, Correa and Lel (2016) reported that after adopting say-on-pay regulation, CEO remuneration decreased and CEO pay-performance sensitivity improved.

Additionally, in the Italian context, where concentrated ownership is high, Belcredi et al. (2014) addressed the relationship between ownership characteristics and say-on-pay voting. These researchers found that widely held companies tended to have higher say-on-pay dissent voting, whereas firms with high concentrated ownership were less likely to have say-on-pay dissent voting. In line with most of the previous studies, Belcredi et al. (2014) found that firms with higher CEO remuneration tended to have higher shareholder dissent voting.

In the Australian context, Kent et al. (2016) revealed that full adoption of Australian stock market recommendations on remuneration committee structure (size and independence) made companies less likely to have higher shareholder dissent voting. Finally, Troeger and Walz

(2016), in Germany, found that say-on-pay voting had no influence on total CEO remuneration.

3.3.2 CEO and executive remuneration

There is widespread concern over increasing levels of CEO remuneration. Public concern has increased since the gap between CEO pay and that of other employees has increased overtime. For example, the CEO and employees pay ratio gap was 47:1 in 1998 and 129:1 in 2015 (Sadan, 2016). Extensive research has investigated the antecedents of CEO and other top executive manager remunerations. This section highlights previous research on the relationship between CEO and executive directors remuneration and corporate board characteristics and research on the impact of remuneration committee characteristics on executive directors pay.

Table 3.2 Summary of Previous Literature on Say-on-Pay

Study	Sample	Key Results
Panel A: say-on-pay voting and firm stock market price		
Cai and Walking (2011)	1,270 US firms (2007)	- Significant positive stock market reaction for firms with high abnormal CEO remuneration.
Cuñat et al. (2016)	US S&P 1500 firms (2006-2010)	- Adopting say-on-pay proposal leads to significant positive stock market value and long-term profitability.
Cuñat et al., (2012)	US S&P 1500 and 500 widely held firms (1997-2007)	- Passing governance proposals (including remuneration proposal) leads to significant positive abnormal stock returns.
Ferri and Maber (2013)	UK FTSE 350 firms (2002-2003)	- Significant positive stock prices reaction, for firms with poor performance, after the announcement of say on pay.
Larcker et al., (2011)	4,856 US firms (2006-2008)	- No consistent findings between different types of corporate governance legislative events (including say-on-pay) and stock return.
Wayner and Wenk (2015)	225 Swiss firms (2006-2010)	- Significant negative market reaction for firms after the announcement of say on pay.
Panel B: antecedents and implications of say-on-pay dissent voting		
Alissa (2015)	UK FTSE 350 firms (2002-2012)	- Excessive CEO remuneration is reduced by high dissent votes via say-on-pay when firm performance is low.

Balsam et al., (2015)	981 US firms (2009-2010)	- High say-on-pay dissent reduces CEO remuneration and made it more performance-based in the following year.
Belcredi et al. (2014)	226 Italian firms (2012)	- Widely held companies tend to have higher say-on-pay dissent voting and firms with high concentrated ownership are less likely to have say-on-pay dissent voting. - firms with higher CEO remuneration tend to have higher shareholder dissent voting
Brunarrski et al., (2015)	US S&P 1500 2010	- No support that say-on-pay legislation has an impact on excessive executive remuneration.
Carter and Zamora (2008)	UK FTSE 350 firms (2001-2006)	- High say-on-pay dissent voting is positively associated with high executive remuneration and low firm performance. - High say-on-pay dissent voting can reduce executive remuneration in the following year.
Conyon and Sadler (2010)	All UK publicly listed firms in the Manifest database (2002-2007)	- Higher executive pay, ownership concentration and firm performance are main determinants of say-on-pay voting. - No evidence that high say-on-pay dissent voting can reduce executive remuneration in the following year.
Correa and Lel (2016)	Multinational data of 38 countries (2001-2012)	- Higher CEO pay and weak corporate governance practice lead to higher say-on-pay voting. - Post adoption of say-on-pay regulation, CEO remuneration decreases and CEO pay-performance sensitivity improves.

Cotter et al., (2013)	1497 US firms (2011)	- Positive impact of high shareholder say-on-pay dissent on executive remuneration.
Ferri and Maber (2013)	UK FTSE 350 firms (2002-2005)	- High shareholder dissent voting is positively related to the removal of controversial CEO remuneration.
Gregory-Smith et al. (2013)	UK FTSE 350 firms (1998-2012)	- Higher CEO remuneration and lower firm performance (stock return) lead to higher say-on-pay dissent voting. - Board independence and number of non-executive directors have no impact on say-on-pay voting. - Post financial crisis, companies become more response to higher shareholder dissent voting than pre financial by decreasing their CEOs remuneration.
Kent et al. (2016)	711 Australian firms (2008)	- Adoption of Australian stock market recommendations on remuneration committee structure make companies less likely to have higher shareholder dissent voting
Kimbro and Xu (2016)	2384-2235 US firms (2011 to 2012)	- Say-on-pay high dissent voting reduces excessive CEO remuneration and boards respond by reducing the growth of executive remuneration.
Stathopoulos and Voulgaris (2016)	UK FTSE 350 firms (2003-2011)	- Long-term investors tend not vote against CEO remuneration and short-term investors are more likely to vote against CEO pay.
Troeger and Walz (2016)	Germany Dax 30 firms (2006-2014)	- Say-on-pay has no influence on total CEO remuneration

Bebchuk and Fried (2003) developed the managerial power approach, which states that managers are more likely to gain power when board governance is weak, there is no shareholder with large ownership and there are fewer institutional investors. The structure of the board plays an important role in constraining managerial power in pay-setting processes (van Essen et al., 2015).

CEO power (CEO duality and CEO tenure), board size and board independence are among the most researched corporate governance features in investigating the relationship between board characteristics and executive remuneration (see Table 3.3 for a summary of these studies). Core et al. (1999) used a sample of 205 US firms from 1982 to 1984 to investigate the relationship between board characteristics and CEO remuneration. These researchers found that firms with CEO duality, larger board size, greater board independence and a busy board had higher CEO remuneration.

Recently, in the US, Armstrong and Ittner (2012) found that weakly governed boards (such as those with CEO duality, CEO tenure, larger board size and less board independence) were more likely to have higher executive remuneration. Similarly, van Essen et al. (2015) used a meta-analysis of 219 US studies that investigated the determinants of CEO remuneration and found that CEO duality, larger board size and greater board independence had positive influence on CEO pay. van Essen et al.'s (2015) findings confirm those of previous studies in the US, such as Core et al. (1999). In contrast, Ryan and Wiggins (2004), in the US, found that firms with larger board size and greater board independence tended to have lower CEO remuneration.

Coles et al. (2014) investigated the reasons why not all independent directors were effective monitors and why their presence on boards may have led to higher CEO remuneration using a data set from US companies from 1996 to 2010. Coles et al. (2014) defined all independent

directors who had been selected by the CEO (when the CEO was present on the remuneration committee) as 'co-opted' directors. These researchers found that firms with higher co-opted directors tended to have higher CEO pay. This result is consistent with a previous finding by Shivdasani and Yermack (1999), who also found that involvement of CEOs in selecting independent directors can lead to higher CEO entrenchment.

Additionally, ownership structure is found to be another important element in controlling executive directors' remuneration (Bebchuk and Fried, 2003). Shareholders with large ownership stakes and institutional investors have more incentives to monitor executive directors effectively (van Essen et al., 2015). Many previous studies have shown that an effective ownership structure (e.g. higher concentrated ownership and higher institutional ownership) led to less CEO remuneration (e.g. Benz et al., 2001; Bertrand and Mullainathan, 2000; Hartzell and Starks, 2003; van Essen et al., 2015). For example, Bertrand and Mullainathan (2000) used data from 51 of the largest US oil firms from 1977 to 1994 and found that firms with lower concentrated ownership had CEOs who were more likely to get higher 'lack' remuneration. Similarly, Benz et al. (2001) reported that companies with higher concentrated ownership had fewer options-based remuneration.

Also, many studies have examined the governance-pay relationship in the UK. For example, Conyon and Peck (1998) investigated the impact of board characteristics on CEO remuneration using a sample from the UK FTSE 100 firms from 1991 to 1994. The researchers found that CEO duality and board independence had no effect on executive remuneration. Similarly, Ozkan (2007), in the UK, found that board size and board independence had positive impacts on executive remuneration.

More recent studies have investigated the impact other corporate governance characteristics on CEO remuneration, such as gender diversity (Adams and Ferreira, 2009; Lucas-Pérez et

al., 2015) and board meeting frequency (Hahn and Lasfer, 2016). More specifically, Adams and Ferreira (2009) used a sample of US firms from 1996 to 2003 and found that the presence of female directors on boards had no influence on CEO remuneration. Contrarily, Lucas-Pérez et al. (2015) used data from a Spanish market from 2004 to 2009 and reported that more gender-diverse boards had less CEO remuneration. Hahn and Lasfer (2016) examined the relationship between lower meeting frequency and executive and chairman remuneration using 241 UK firms from 1999 to 2012. These researchers found that firms with a lower meeting frequency tended to distribute more executive and chairman remuneration.

Many decisions related to executive remuneration are made by the remuneration committee (Daily et al., 1998). A few previous studies examined the characteristics of remuneration committees possibly associated with CEO remuneration (see Table 3.3.2 for a summary of these studies). For example, Conyon and Peck (1998) reported that the independence of remuneration committees in the UK had a limited effect on executive pay. Furthermore, in the UK, Gregory-Smith (2012) found no support for the relationship between the independence of the remuneration committee and CEO remuneration. Similarly, in the US, Daily et al. (1998) found no evidence that the independence of the remuneration committee affected CEO pay.

Few studies have addressed the impact of diversity on remuneration committees on CEO pay (e.g. Bugeja et al., 2015; Masulis et al., 2012). First, Bugeja et al. (2015), in the US, investigated the relationship between the presence of women on remuneration committees and CEO remuneration. These researchers found that the presence of women on firms' remuneration committees had a negative impact on CEO pay. Masulis et al. (2012) argued that not all types of diversity is beneficial and that foreign directors are less effective monitors. Specifically, Masulis et al. (2012) reported that the presence of foreign directors on remuneration committees led to higher CEO remuneration.

In addition, a number of studies have examined whether remuneration committee characteristics play a role in aligning firm performance with CEO remuneration (e.g. Newman and Mozes, 1999; Vafeas, 2003). First, Vafeas (2003), in the US, revealed that firms with a higher proportion of independent directors on their remuneration committees were more likely to have better performance-CEO pay alignment. In the US, Newman and Mozes (1999) also reported that remuneration committee independence helped align firm performance with CEO pay.

3.3.3 Gender diversity on boards

'Corporate boards perform better when they include the best people who come from a range of perspectives and backgrounds' (Davies Report, 2011). The Davies Report (2011) elucidated that the importance of diversity on boards is not just a game of numbers, but rather goes beyond this perspective; it represents the richness of the board in terms of knowledge, experience and skills.

Diversity on corporate boards has gained tremendous interest and attention from the public, policymakers and academics. There are different dimensions of diversity, which have gained particular interest in the literature; these dimensions include gender, age, ethnicity, education, board experience, professional experience and nationality.

Table 3.3 Board Characteristics and Executive Remuneration.

Study	Sample	Key Results
Panel A Board characteristics, ownership and executive remuneration		
Adams and Ferreira (2009)	S&P 500 (1996-2003)	- Presence of women directors on boards have no influence on CEO remuneration.
Armstrong and Ittner (2012)	2110 US firms (2006-2007)	- Firms with weak corporate governance (e.g. CEO duality, CEO tenure, lower board independence and busy board) have higher CEO remuneration.
Conyon (1997)	100 UK firms (1988-1993)	- CEO duality has no effect on executive remuneration.
Conyon and Peck (1998)	100 UK firms (1991-1994)	- CEO duality and board independence have no impact on executive remuneration.
Core et al. (1999)	205 US firms (1982-1984)	- Firms with CEO duality, larger board size, higher board independence and busy board have higher CEO remuneration.
Cyert et al. (2002)	1648 US firms (1992-1993)	- Firms with CEO duality, larger board size have mixed result CEO remuneration. - Firms with higher board independence have less cash remuneration - Firms with higher CEO ownership have higher executive remuneration.
Hahn and Lasfer (2016)	241 UK firms (1999-2012)	- Firms with lower board meeting frequency have higher CEO and chairman remuneration.
Hartzell and Starks (2002)	1914 US firms (1991-1997)	- Firms with higher Institutional ownership have less executive remuneration.

Lucas-Pérez et al. (2015)	120 Spanish firms (2004-2009)	- Firms with higher gender diversity have less executive remuneration.
Ozkan (2007)	414 UK firms (2003-2004)	- Firms with larger board size, higher board independence and less institutional ownership have higher executive remuneration.
Ryan and Wiggins (2004)	1018 US firms (1995-1997)	- Firms with fewer CEO tenure, larger board size and higher board independence have less executive remuneration.
van Essen et al. (2015)	US Meta-analysis	- Firms with CEO duality, larger board size, and higher board independence have higher CEO remuneration. - Firms with higher Institutional ownership have less CEO remuneration.
Panel B Remuneration committee characteristics and executive remuneration		
Anderson and Bizjak (2003)	US large firms (1985-1994)	- Remuneration committee independence has no effect on CEO pay
Bugeja et al. (2015)	1554 US firms (2002-2009)	- Firms with higher gender diverse remuneration committees have lower CEO remuneration.
Conyon (1997)	100 UK firms (1988-1993)	- Remuneration committee independence has no effect on CEO pay.
Conyon and Peck (1998)	100 UK firms (1991-1994)	- Remuneration committee independence has limited effect on CEO pay.
Daily et al. (1998)	200 US firms (1992-1994)	- Remuneration committee independence has no effect on CEO pay.
Gregory-Smith	UK FTSE 350 firms	- Remuneration committee independence has no effect on CEO pay.

(2012)	(1996-2008)	
Masulis et al. (2012)	S&P 1500 (1998-2006)	- presence of foreign directors on remuneration committees lead to higher CEO remuneration
Newman and Mozes (1999)	US large firms (1991-1993)	- Remuneration committee independence align firm performance with CEO pay.
Vafeas (2003)	US large firms (1991-1997)	- Remuneration committee independence align firm performance with CEO pay.

Table 3.4 Women on Boards Literature

Study	Sample	Key Results
Panel A Women directors' characteristics on boardrooms		
Adams and Ferreira (2009)	US S&P 500 firms (1996-2003)	- Have better attendance. - More effective monitors. - Their firms have more CEO turnover.
Hillman et al. (2002)	US Fortune 1000 firms (1993-1997)	- Have more advanced education. - Come from non-business background. - Join multiple boards at faster rate than male directors.
Nielsen and Huse (2010)	201 Norwegian firms (2003)	- Firm with more female directors have better strategic board control. - Firms with more female directors are more likely to conduct board development activities.
Ruigrok et al. (2007)	269 Swiz firms (2004)	- Selected base on family ties. - Have less advanced education. - More independent.
Singh et al. (2008)	UK FTSE 100 firms (2001-2004)	- Have international experience. - Younger than male. - More likely to possess an MBA degree.
Zelechowski and Bilimoria (2004)	US Fortune 1000 firms (1999)	- Male and female directors have relatively same tenure and education. - Have fewer directorships than male in other firms. - Have less powerful corporate title.

Panel B Gender diversity and risk-taking		
Adams and Ferreira (2004)	1024 US firms (1998)	Firms with higher stock price volatility tend to have fewer female directors on their boards.
Adams and Ferreira (2009)	US S&P 500 firms (1996-2003)	Firms with more female directors have less stock price volatility.
Faccio et al. (2016)	Amadeus top 250,000 firms (1999-2009)	Firms with female CEOs tend to have lower leverage, less volatile earnings and higher chance of survival.
Farag and Mallin (2016a)	892 Chinese firms (1999-2009)	Female CEOs are not less risk-taking than male CEOs.
Farrell and Hersch (2005)	309 US large firms (1990-1999)	Negative and significant relationship between risky firms and newly appointed female directors.
Gregory-Smith et al., (2014)	UK FTSE 350 (1996-2011)	No relationship between risky firms and newly appointed female directors.
Huang and Kisgen (2013)	116 US firms (1993-2005)	Female executives are less likely to undertake M&A and issue new debt.
Levi et al., (2014)	US S&P 1500 firms (1997–2009)	Firms with more female directors tend to make less M&A.
Perryman et al., (2016)	2454 US firms (1992-2012)	Firms with more gender diversity have lower risk.
Sila et al., (2016)	1960 US firms	No significant relationship between higher female directors on boards and equity risk.

	(1996-2010)	
Panel C Gender diversity and firm performance		
Adams and Ferreira (2009)	US S&P 500 (1996-2003)	Negative relationship between higher gender diversity and firm performance.
Ararat et al., (2015)	Top 100 Turkish firms (2006)	Positive and significant relationship between higher gender diversity and firm performance.
Bøhren and Strøm (2010)	Norway large firms (1989-2002)	Negative relationship between higher gender diversity and firm performance.
Bonn et al., (2004)	104 Australian and 169 Japanese firms (1998)	Positive and significant relationship between higher gender diversity and firm performance.
Campbell and Minguez-Vera (2008)	68 Spain firms (1995-200)	Positive and significant relationship between higher gender diversity and firm performance.
Carter et al., (2003)	638 US firms (1997)	Positive and significant relationship between higher gender diversity and firm performance.
Carter et al., (2010)	472-487 US firms (1998-2002)	Positive and significant relationship between higher gender diversity and firm performance.
Dezso and Ross (2012)	S&P 1500 US firms (1992-2006)	Positive and significant relationship between higher gender diversity and firm performance, but only when firm's strategy is focused on innovation.
Erhardt et al., (2003)	127 US large firms (1993 and 1998)	Positive and significant relationship between higher gender diversity and firm performance.

Farag and Mallin (2016b)	892 Chinese firms (1999-2009)	Positive and significant relationship between higher gender diversity and firm performance.
Haslam et al. (2010)	UK FTSE 100 (2001-2005)	No significant relationship between higher gender diversity and firm performance.
Joecks et al., (2013)	151 German firms (2000-2005)	Positive and significant relationship between firms with three and more female directors and firm performance.
Liu et al., (2014)	Chinese large firms (1999-2011)	Positive and significant relationship between higher gender diversity and firm performance.
Mallin and Farag (2017)	UK FTSE 350 firms (2004-2013)	Positive and significant relation between board gender diversity and firm performance
Miller and Triana (2009)	Fortune 500 firms (2002-2005)	No significant relationship between higher gender diversity and firm performance.
Perryman et al. (2016)	Fortune 500 US firms (1992-2012)	Positive and significant relationship between higher gender diversity and firm performance.
Reguera-Alvarado (2015)	125 Spain firms (2005-2009)	Positive and significant relationship between higher gender diversity and firm performance.
Rose (2007)	Danish firms (1998-2001)	No significant relationship between higher gender diversity and firm performance.
Terjesen et al. (2016)	3,876 firms in 47 countries (2010)	Positive and significant relationship between higher gender diversity and firm performance.

There is substantial and growing interest among researchers, shareholder activists and policymakers about gender diversity at the corporate board level. Hence, firms are now under public pressure to enhance the representation of women at the board level (Sila et al., 2016). As previously stated, in the UK, the Davies Report (2011) recommended a target for FTSE 350 firms for female representation at the board level of 25% by 2015[6]. Since then, the number of women on corporate boards has seen a noticeable increase[7]. Despite this evidence, male directors still dominate corporate boards. For example, in 2015, women held only 23.5% and 18% of total directorships in FTSE 100 and FTSE 250 firms, respectively (Davies Review Annual Report, 2015). Moreover, many European countries, such as Norway, Belgium, France and Italy, have set legalisations mandating a certain percentage of female representation at the board level (Sila et al., 2016).

Interestingly, more pressure to increase female representation at the board level has come from some of the leading institutional investors such as Calvert Investment Management, Inc. and Trillium Asset Management Corp. For instance, Calvert Investment Management, Inc rejected a non-binding proposal to re-elect key male directors for Sage Group plc in their annual meeting (dated 01 March 2016), and their rationale was 'The board does not include at least one minority director after the election' (Proxy Insight[8], 2016).

Empirically, the relationship between the presence of women on corporate boards and firm outcomes has been investigated widely by many studies. The aim of this sub-section is to summarise previous studies that show the benefits of female directors on boards. Also, this sub-section addresses studies that investigate the relationship between women on boards and firm performance.

[6] Hampton-Alexander Review (2016) has recommended FTSE 350 firms set a target of 33% female representation on their corporate boards by 2020.
[7] See Chapter 6 for more results on female representation on UK boards from 2003 to 2015.
[8] An independent company that provides data on corporate governance, especially data related to shareholders voting on different resolutions.

i. Characteristics of female directors on corporate boards

There is a considerable amount of literature that addresses the benefits and characteristics of female directors on corporate boards (see Table 3.4, Panel A for summary). For example, Hillman et al. (2002) used a sample from the US Fortune-1000 between 1993 and 1997 and found that female directors tended to hold more advanced education degrees than male directors. Moreover, female directors were more likely to come from non-business backgrounds and had interests in joining multiple boards at faster rates than their male counterparts (Hillman et al., 2002).

Additionally, in the US, Adams and Ferreira (2009), including only female non-executive directors, found that female directors had better attendance rates and were more effective monitors than male directors. Further, these researchers found that firms with more female directors tended to have higher CEO turnovers. Likewise, Singh et al. (2008) reported that female directors in UK FTSE 100 companies were more likely to have more international experience, be younger and hold more Master's of Business Administration (MBA) degrees than male directors.

Nielsen and Huse (2010), in Norway, investigated the characteristics of firms with female directors on their boards and found that firms with more female directors were more likely to make better strategic decisions and use more board development activities, such as evaluation and training programs. However, Zelechowski and Bilimoria (2004) examined only female executive directors in a sample of the US Fortune-1000 in 1999 and found that female and male directors had relatively similar education levels, board experience and board tenure. However, the researchers found that female directors had fewer directorships than male directors in other listed firms. Moreover, Zelechowski and Bilimoria (2004) reported that female directors had a less powerful title and lower remuneration than male directors had.

Additionally, Ruigrok et al. (2007) used a data set of large Swiss firms and reported that female directors tended to have fewer advanced qualifications than male directors had. The researchers justified this finding by stating that those female directors were selected to the board based on family ties and connections, rather than their qualities. Peck et al. (2007) also found that female directors were more independent from management than their male counterparts were.

ii. Board gender diversity and risk taking

Another group of studies addressed the relationship between women on boards and different types of firm risk measures, including merger and acquisition, return volatility and leverage. These studies proved that female directors were more risk averse than male directors were (see Table 3.4, Panel B for a summary of these studies). For example, Adams and Ferreira (2004 and 2009), in the US, found that firms with more female directors in their boardrooms tended to have less stock volatility. Similarly, Farrell and Hersch (2005) used a sample of 309 large US firms between 1990 and 1999 and found that a new appointment of female directors on boards was less likely to be in risky firms.

In addition, studies that used merger and acquisition as a measure of risk taking found evidence that female directors were less likely to take risks. For example, Huang and Kisgen (2013) and Levi et al. (2014) reported that firms with more female directors tended to make fewer acquisitions. A recent study by Perryman et al. (2016) in the US also showed that firms with more gender diversity at top management levels had lower risk.

In contrast, a number of studies found no evidence that female directors were more risk averse than male directors were. For example, Gregory-Smith et al. (2014) found no evidence that female directors were less appointed in volatile firms using a data set of UK FTSE 350 firms from 1996 to 2011. Similarly, Farag and Mallin (2016a) examined the relationship

between female CEOs and risk taking in a sample of 892 Chinese IPOs from 1999 to 2009 and found that female CEOs were not more risk averse than were male CEOs. Equally, Sila et al. (2016), in the US, found no evidence that women on corporate boards were linked with firm equity risk.

iii. Board gender diversity and firm performance

One of the most explored areas in board diversity is the relationship between gender diversity and firm performance. The results from these studies revealed no specific answer to this relationship (see Table 3.4, Panel C). For example, Carter et al. (2003) presented the first empirical evidence investigating whether board diversity was associated with better firm performance. In Carter et al.'s (2003) study, they used data from 638 US publicly listed firms in 1997 and found that there was a significant positive relationship between the percentage of women on boards and firm performance, as measured by Tobin's Q. Another study by Carter et al. (2010), in the US, found a positive association between female representation on boards and firm performance (Tobin's Q and ROA).

Similarly, Erhardt et al. (2003) examined the relationship between diversity and firm performance in two different years (1993 and 1998) using 127 large US firms. The researcher's findings revealed a positive relationship between diversity, including gender diversity, and firm performance. Additionally, Campbell and Minguez-Vera (2008) used data from 68 listed firms in Spain between 1995 and 2000 and found that the relationship between gender diversity and firm performance (Tobin's Q) was positive. Furthermore, Miller and Triana (2009) found a positive, but not significant, relationship between gender diversity and firm performance, as measured by return on investment (ROI) and return on sales (ROS). These researchers used data from US Fortune 500 firms between 2002 and 2005.

More recent studies showed more positive results of gender diversity on firm performance. For example, Dezso and Ross (2012) used data from US S&P 1500 firms from 1992 to 2006 and revealed a positive association between gender diversity and firm performance, but only when the firm's strategy was focused on innovation. Additionally, Liu et al. (2014), in China, used data from large listed firms between 1999 and 2011 to investigate the relationship between female representation at the board level and firm performance (ROA and ROS) and found a positive and significant relationship between these two variables. Similarly, in China, Farag and Mallin (2016b) reported a positive bi-directional relationship between financial performance and gender diversity.

Other recent studies by Perryman et al. (2016) and Reguera-Alvarado (2015), in the US and Spain, respectively, showed that the increasing number of women on boards is associated with better firm performance, as measured by Tobin's Q. In addition, Terjesen et al. (2016) conducted a global study in 2010 of 47 countries and concluded that firms with more female directors tend to have better firm performance. Finally, Mallin and Farag (2017) used a large sample from the UK FTSE 350 firms and found that firms with more women on their boards tended to have better performance.

On the contrary, a study by Adams and Ferreira (2009), where they tested the association between the number of female directors on a board and firm performance, found that in weakly governed firms, the presence of female directors had a positive impact on firm performance, whereas in strongly governed firms, 'enforcing gender quotas in the boardroom could ultimately decrease shareholder value'.

Additionally, Bøhren and Strøm (2010) found that imposing a mandatory quota on Norwegian firms from 1989 to 2002 resulted in a negative relationship between the percentage of female directors and firm performance, as measured by Tobin's Q, ROA and

ROS. Another study by Rose (2007) regarding Danish firms from 1998 to 2001 found no relationship between gender diversity and firm performance. Equally, in the UK, Haslam et al. (2010) use data from FTSE 100 firms from 2001 to 2005) and found a negative association between firm performance and gender diversity, as measured by Tobin's Q, and no relationship when measured by ROA and ROE.

3.3.4 Foreign directors on boards (nationality diversity)

In contrast to gender diversity, research in the area of corporate governance gives less attention to nationality diversity despite its importance. Nationality diversity at the board level signifies the number of foreign directors on boards. Previous research has shown that foreign directors on boards can serve as a 'double-edged sword' (e.g. Frijns et al., 2016; Masulis et al., 2012; Milliken and Martins, 1996).

From the perspective of the resource dependence theory, foreign directors on corporate boards are favourable and beneficial. Some scholars believe that foreign directors can be beneficial in helping companies gain knowledge about international markets and regulations (Estélyi and Nisar, 2016). Yet, other scholars believe that foreign directors are less effective monitors (Masulis et al., 2012) and that miscommunications and conflicts may increase with the presence of foreign directors on boards (Frijns et al., 2016; Harrison and Klein, 2007).

Whether foreign directors are beneficial or not, few scholars have highlighted this issue empirically. Among those that have, Masulis et al. (2012) examined the costs and benefits of foreign directors using a sample of US S&P 1500 companies from 1998 to 2006. First, Masulis et al. (2012) found that foreign directors were beneficial in an advisory role, specifically they found that firms with more foreign directors 'make better cross-border acquisitions'. However, the researchers also found that foreign directors lacked sufficient oversight on executive directors. In this regard, Masulis et al. (2012) revealed that firms with

a higher percentage of foreign directors on their boards exhibited more financial misreporting, higher CEO remuneration, less CEO turnover and lower firm performance.

Similarly, Frijns et al. (2016) investigated the impact of foreign directors on firm performance using data from a sample of large UK companies between 2002 and 2014. Frijns et al. (2016) argued that firms with more foreign directors tended to have more coordination problems, slower communications and more confusion among their directors. Frijns et al. (2016)'s findings indicated that the presence of foreign directors on boards led to lower firm performance. Additionally, Mallin and Farag (2017) examined the relationship between the presence of foreign directors on UK FTSE 350 boards and firm performance from 2004 to 2013 and found that firms with a higher proportion of foreign directors were more likely to have lower firm performance.

Contrarily, Estélyi and Nisar (2016), using a sample from the UK, found that the presence of foreign directors on boards led to better firm performance. However, the research also showed a positive association between the presence of foreign directors on boards and CEO remuneration. In addition, Estélyi and Nisar (2016) investigated the determinants of diverse nationality on boards and found that firms with more foreign directors tended to have more product market heterogeneity, less CEO power, greater institutional ownership, more independent directors and higher stock price volatility.

Staples (2007) addressed the antecedents of foreign directors in 80 international firms and found that mergers and acquisitions played an important role in increasing nationality diversity. Moreover, van Veen and Marsman (2008) analysed the factors involved in improving nationality diversity in Europe and found that nationality diversity was affected by the firm's international activities, firm size and mergers and acquisition activities. Additionally, van Veen and Elbertsen (2008) investigated the influence of corporate

governance regimes on nationality diversity in three European countries, the UK, Germany and the Netherlands, in 2005 and found a strong effect between governance regimes and nationality diversity.

3.3.5 Other board characteristics

Although many studies have investigated the relationship between corporate governance (more specifically, board characteristics) and firm performance, no specific answer to this relationship has been provided. Whereas some researchers such as Cheng (2008), Duchin (2010) and Jackling and Johl (2009) found a positive association between corporate governance and firm performance, others such as Agrawal and Knoeber (1996), Vafeas and Theodorou (1998) and Yermack (1996) found no significant relationship.

Most of the board characteristics studied in the previously mentioned literature were related to board size, board composition and CEO duality. The studies reviewed these characteristics either individually or in combination. The subsequent paragraphs review these studies.

i. Board size

The relationship between board size and firm performance is one of the fundamental issues discussed in the corporate governance literature. The board of directors mainly performs two functions: monitoring and advising (Adams and Ferreira, 2007; Raheja, 2005). The monitoring function involves monitoring, disciplining and removing ineffective management teams (Guest, 2009) and providing performance assessments of the company and CEO (Hermalin and Weisbach, 2001). The advising function includes facilitating advice to the CEO and accessing important information and resources (Fama and Jensen, 1983). The size of a board is an important factor in the board's ability to function effectively (Coles et al., 2008). There is disagreement as to what size the board should be. Some studies view larger boards as problematic (e.g. Guest, 2009; Jensen, 1993; Lipton and Lorsch, 1992; Yermack,

1996), whereas some view larger boards as beneficial (e.g., Dalton et al., 1999; Lehn et al., 2009).

The debate on the association between larger boards and firm performance is closely related to discussions in previous studies relating to group decision making in the areas of economics and social psychology (Cheng, 2008). For example, in the field of economics, Sah and Stiglitz (1987, 1991) argued that in larger groups, inaccuracies of decision making among individuals might increase, communication among individuals is costly, individual capabilities in handling information differ and final decisions must be of majority agreement. As a result, the probability of rejecting risky projects increases, as the decision has to be considered as good by a majority of the group members (Cheng, 2008). An example provided by Moscovici and Zavalloni (1969), from the field of social psychology, supported the previous argument, in that, the final decision is a compromise of many decisions.

Lipton and Lorsch (1992) argued that the norms of most 'boardrooms are dysfunctional', as only a minority of directors criticise CEOs' decisions or give less 'candid discussion' about firm performance. Similarly, Jensen (1993) pointed out that in boardrooms, politeness and courtesy are more common than truth and frankness. As a result, many problems associated with larger board sizes might arise, such as coordination and communication, free-rider problem and less ability to control the CEO (Eisenberg et al., 1998; Jensen, 1993; Lipton and Lorsch, 1992; Yermack, 1996). For example, coordination and communication problems with larger boards are related to difficulties in arranging board meetings and slower and less efficient decision making for a final conclusion (Jensen, 1993). Similarly, the probability of free-rider problems increase with larger boards, as directors are less willing to exercise their diligence (Lipton and Lorsch, 1992). Furthermore, 'large boards are more captive to the CEO, making the CEO more powerful in decision making' (Cheng, 2008). Additionally, Yermack (1996) stated that a CEO incentive scheme and the threat of dismissal works less

efficiently with large boards. In response to these problems, Lipton and Lorsch (1992) recommended that the optimal board size should be between eight and nine directors, and Jensen (1993) recommended the board size should be between seven and eight directors.

Nevertheless, some researchers see large boards an advantage (Dalton et al., 1999; Lehn et al., 2009). These advantages relate to greater collective information (Dalton et al., 1999) and more independent directors (Lehn et al., 2009). For example, Dalton et al. (1999) argued that large boards might increase a company's external resources; however, this increase is conditional on the number of independent directors, which must also be increased.

Regarding the empirical literature, the results concerning the relationship between board size and firm performance are mixed, but overall results of this literature support the view that larger board size negatively impacts firm performance (e.g. Beiner et al., 2006; Cheng, 2008; Coles et al., 2008; Eisenberg et al., 1998; Guest, 2009; Loderer and Peyer, 2002; Yermack, 1996). For example, Yermack (1996) used data from 452 large US firms between 1984 and 1991 and found a significant negative relationship between large board size and firm performance, as measured by Tobin's Q. Similarly, Eisenberg et al. (1998), in Finland, used data from a sample of 879 small and mid-sized firms and also found a negative relationship between large board size and firm performance. Additionally, in the UK, Guest (2009) used an unbalanced sample of 2,746 firms between 1981 and 2002 and reported a negative relationship between larger board size and firm performance (ROA and Tobin's Q).

However, variation in the results of previous studies may be because certain sizes of boards might be optimal under certain circumstances (Raheja, 2005) and one size does not fit all (Coles et al., 2008). For example, Coles et al. (2008), in the US, found evidence that large boards are optimal for complex firms (firms with a large scope of operations, large firm size and more leverage) and small boards are optimal for simple firms (firms with a small scope

of operations, small firm size and less leverage). Additionally, Aggarwal et al. (2012) stated that larger boards are more beneficial for non-profit organisations, and Dalton et al. (1999) found that larger boards are desirable when boards are dominated by independent directors. Guest (2009) stated that 'the relationship between board size and performance may differ not just by firm-specific characteristics but also by national institutional characteristics'. Other studies contended that what are believed to be good corporate governance practices might not work under certain circumstances (Dowell et al., 2011; Essen et al., 2013; Mangena et al., 2012; Minichilli et al., 2015). For instance, Dowell et al. (2011) argued that a one-size-fits-all practice for governance is ineffective and that larger board size is not useful during unstable economic conditions. In the context of the US, these researchers found that larger boards increased the level of financial distress during a financial crisis. However, Mangena et al. (2012), in Zimbabwe, and Essen et al. (2013), in Europe, believed that a larger board size was better during times of uncertainty and found that larger board size had a significant and positive impact on firm performance during times of financial crisis.

ii. Board independence

Globally, there is agreement of corporate governance codes in that each include requirements to include independent directors on a given board (Jackling and Johl, 2009). For example, in the US, independent directors must compose a majority of the board (Chhaochharia and Grinstein et al., 2007), whereas in UK FTSE 350 firms, 'at least half of the board, excluding the chairman, should comprise non-executive directors determined by the board to be independent' (e.g. the UK Corporate Governance Code of 2010, 2012, 2014 and 2016; the Combined Code of 2003, 2006 and 2008).

Dalton et al. (1998) stated that 'A preference for outsider-dominated boards is largely grounded in agency theory'. The agency theory is based on the assumption that there is a

conflict of interest between management and owners (Fama and Jensen, 1983), and this conflict can be minimised by appointing non-executive directors to monitor executive directors' behaviours, through compensation schemes or both (Hoskisson et al., 1994). Additionally, to pursue the monitoring function effectively, non-executive directors should be fully independent (Fama and Jensen, 1983). Accordingly, the agency theory advocates that an effective board should be composed of mostly independent directors (Dalton et al., 1998). Furthermore, the resource dependence theory suggests that non-executive directors may help their firms access strategic outside resources through their past experiences and networks and, consequently, improve firm performance (Dalton et al., 1998).

However, the assumption often is that executive directors are good keepers of the company (Donaldson and Davis, 1994) and not likely to misuse company resources (Dalton et al., 1998; Donaldson and Davis, 1991). Moreover, non-executive directors work on a part-time basis in the firm, which might limit their information and knowledge about the company's daily operations and, consequently, may affect firm performance negatively (Bozec, 2005). Bhagat and Black (2002) addressed different reasons why independent directors may not be effective. First, the researchers acknowledged that compensation of managers might not be sufficient. Second, the researchers argued that directors are sometimes independent but not accountable enough. Third, the researchers claimed that some directors perceived to be independent are, in fact, not independent from management. Moreover, Bhagat and Black (2002) provided other reasons why independent directors are not efficient, such as extended tenures of service, old age and concerns about the interests of other businesses.

Several studies have investigated empirically the relationship between board independence and firm performance in the literature (e.g. Agrawal and Knoeber, 1996; Baysinger and Butler, 1985; Bhagat and Black, 2002; Carter et al., 2003; Coles et al., 2001; Dalton et al., 1998; Jackling and Johl, 2009; Rosenstein and Wyatt, 1990). However, the results from this

literature are inconclusive. Consistent with the agency theory, Baysinger and Butler (1985) used data from 266 US firms from 1970 to 1980 and found a significant positive relationship between an increase in the number of independent directors and firm performance. Rosenstein and Wyatt (1990) similarly found a significant reaction between stock prices and the appointment of independent directors in the US. Millstein and MacAvory (1998), using a sample of 154 large public US firms between 1991 and 1995, found that active and independent boards had a positive and significant impact on firm performance.

However, Agrawal and Knoeber (1996) and Coles et al. (2001) investigated the relationship between board independence and firm performance in the US and found a negative association between these variables. Furthermore, another stream of research found that no significant relationship existed between the number of independent directors and firm performance. For example, in the UK, Vafeas and Theodorou (1998) used data from 250 firms traded in 1994 and reported that the number of independent directors had no impact on firm performance, as measured by market-to-book (MB) ratio. Similarly, Dalton et al. (2008) conducted a meta-analysis of 54 empirical studies on board composition and firm performance and found no relationship between them.

Other recent studies have proposed that the effectiveness of corporate governance, more specifically the monitoring function of the agency theory, may not work effectively under certain conditions and, rather, may be contingent on many organisational, environmental and economical characteristics (Aguilera and Desender, 2012; Boyd, 1995; Dowell et al., 2011; Desender et al., 2013; Essen et al., 2013; Finkelstein and D'Aveni, 1994; Minichilli et al., 2015), which may explain the variations in results described in the previous paragraph. For example, Gupta et al. (2012) argued that corporate governance outcome is contingent on the industry context, whereas Chen et al. (2011) argued that effective governance is contingent on national economic development. Desender et al. (2013) and Minichilli et al. (2015)

contended that effective governance is contingent on ownership structure, and Daily and Dalton (1994) found that firms that went bankrupt usually had fewer independent directors. Furthermore, Dowell et al. (2011) contended that there is no one-size-fits-all scheme, and board independence is only valuable during financially distressed periods. Dowell et al. (2011) used data from 227 US public Internet firms to test the relationship between board characteristics (including board independence) and firm survival during the collapse of the Internet bubble between 2000 and 2002 and reported that board independence had a significant role in reducing firms' financial distress, but only during times when financial distress was high.

iii. CEO Duality

Another vital corporate governance characteristic is CEO duality. CEO duality has been attributed to many corporate failures in the last decade (Jackling and Johl, 2009). Many governments around the world have adopted codes for CEO duality. For example, the UK code clearly states that 'The roles of chairman and chief executive should not be exercised by the same individual' (e.g., the UK Corporate Governance Code of 2010, 2012, 2014 and 2016; the Combined Code of 2003, 2006 and 2008). However, the essence of this statement is not compulsory; under any circumstances, any company might not comply with this statement and give explanations for its noncompliance. In the US, there is no such code for CEO duality.

Theoretically, two main theories have dominated the literature in addressing the relationship between CEO duality and firm performance: the agency theory and the stewardship theory. Under the agency theory perspective, the assumption is that duality leads to less board monitoring and more CEO power (Dalton et al., 1998; Dayton, 1984; Finkelstein et al., 1994; Jensen, 1993); therefore, the board should be separated from the management to improve its

monitoring role and reduce agency costs and CEO entrenchment (Fama and Jensen, 1983a). If the functions of chairman and CEO are not separated, firm performance might be affected adversely (Jensen, 1993; Lipton and Lorsch, 1992). Additionally, Lipton and Lorsch (1992) and Haniffa and Cooke (2002) reported that non-duality of CEO and chairman increases the likelihood of board independence and better monitoring of the executive team. Also, separating the role of CEO and chairman might enable the board to terminate poorly performing CEOs (Jensen, 1993; Monks and Minow, 2004).

However, the stewardship theory assumes that CEOs are far from being 'an opportunistic shirker' and are good enough to do their work as steward of the company's assets (Donaldson and Davis, 1991). Additionally, CEO duality may lead to less conflict in decision making (Davis et al., 1997) and help the board make faster decisions (Essen et al., 2013). Vafeas and Theodorou (1998) stated that CEO duality enables a board to reduce the remuneration of top management, and it also increases accountability when a company performs poorly (Bozec, 2005).

A number of empirical studies have used both theories to address the relationship between CEO duality and firm performance (e.g. Adams et al., 2005; Dahya et al., 2009; Daily and Dalton, 1994; Dalton et al., 1999; Donaldson and Davis, 1991; Rechner and Dalton, 1989). Yet, the results from these studies vary. Initially, Rechner and Dalton (1989) investigated the impact of CEO duality on firm performance and found that no relationship existed; however, later, Rechner and Dalton (1991) used the same sample and period but with different measures of firm performance (ROI, ROE and profit margin). In the second study, the researchers found a negative effect occurring between CEO duality and firm performance. Daily and Dalton (1994) also found that duality had a negative effect on firm performance. Likewise, Worrell et al. (1997) reported that firms that consolidate the roles of CEO and chairman showed a negative relationship with their financial performance. Furthermore,

Adams et al. (2005) found that a CEO who performed dual roles had more power and could influence the decisions of other members of the board, leading them to report that CEO duality has a negative impact on corporate performance.

Nevertheless, a considerable number of other empirical studies have found a positive relationship between CEO duality and firm performance. For example, Donaldson and Davis (1991) used the stewardship theory as an alternative to the agency theory to explain the relationship between CEO duality and firm performance. In doing so, the researchers found that companies with CEO duality have better performance. Kiel and Nicholson (2003) revealed a positive association when the CEO and chairman roles were consolidated in Australia. In the US, Dey et al. (2011) found that negative firm performance was associated with firms that separate the CEO and chairman roles due to regulatory and governance pressures. Furthermore, in the UK, Dahya et al. (2009) found no absolute improvement in firm performance when firms changed board structures from duality to non-duality because of Cadbury Committee Report pressures. Yang and Zhao (2014) revealed that firms with the duality structure outperformed firms with non-duality when competitive environments changed.

Still, other empirical studies on CEO duality have reported neither a positive nor negative effect on firm performance. For example, Brickley et al. (1997) argued that the decision to combine or separate the roles of CEO and chairman carries both potential costs and benefits, and they found that the costs of separating the roles were higher than the benefits of duality for most large firms. Baliga et al. (1996) found that changes in duality had no effect on firm performance, as did Dalton et al. (1998), who used a meta-analysis of 31 studies on duality and corporate performance. Similarly, Bozec (2005) reported no correlation between duality and firm performance in Canada.

A new stream of research has argued that the relationship between governance practices and firm performance, including CEO duality, is not consistently beneficial but contingent on other factors, such as firm, organisational and economic characteristics (Aguilera and Desender, 2012; Boyd, 1995; Desender et al., 2013; Dowell et al., 2011; Essen et al., 2013; Finkelstein and D'Aveni, 1994; Minichilli et al., 2015). There is clear evidence that CEO duality can be favourable under particular conditions, such as low munificence and high uncertainty (Boyd, 1995; Dowell et al., 2011; Essen et al., 2013; Finkelstein and D'Aveni, 1994; Harris and Helfat 1998). For example, by using data from 192 US firms, Boyd (1995) found a positive and significant relationship between CEO duality and firm performance when the surrounding environments were classified by low munificence and high uncertainty. Also, Dowell et al. (2011) provided different reasons why CEO power is beneficial during times of financial crisis. First, reactions to sudden changes are well managed under CEO duality. Second, CEOs with great power may have more incentive to avoid the 'stigma of failure'. Finally, concentrated CEO power could result in extreme decisions, which the researchers argued was beneficial during financial crisis.

3.4 Research Gaps

Most of the previous studies discussed regarding say-on-pay voting focused on the antecedents and implications of the approach. The studies on the antecedents of say-on-pay voting found higher CEO remuneration, greater firm performance, larger firm size, weaker corporate governance and heterogeneity of institutional investors among the factors most influential on say-on-pay dissent voting (e.g. Alissa, 2015; Cai and Walking, 2011; Carter and Zamora, 2009; Conyon, 2016; Conyon and Sadler, 2010; Ferri and Maber, 2013; Kimbro and Xu, 2016; Sauerward et al., 2016; Stathopoulos and Voulgris, 2016). Additionally, the studies concerning the implications of say-on-pay voting supported the idea that high say-on-

pay dissent voting was effective in reducing future CEO remuneration (e.g. Alissa, 2015; Balsam et al., 2015; Ferri and Maber, 2013; Kimbro and Xu 2016).

Regarding board diversity, studies have focused mainly on board characteristics and the benefits of diversity, the relationship between diversity and risk taking and the relationship between diversity and firm performance. However, the influence of diversity on say-on-pay voting is still unexplored. The presence of female directors on a board might bring different skills and knowledge to the table (Adams and Ferreira, 2009; Hillman et al., 1997; Nielsen and Huse, 2010; Singh et al., 2008). Female directors are also believed to be tough monitors (Adams and Ferreira, 2009) and more independent from the management (Peck et al., 2007). This independence may enable female directors to evaluate and monitor the arrangement of executive remuneration carefully and enable the board to produce decisions that lead to less extreme executive remuneration.

Additionally, none of the previous studies examined the impact of nationality diversity or foreign directors on say-on-pay voting. Foreign directors are found to be useful in the advisory role, especially for companies that operate or have plans to expand internationally. Although, foreign directors might be less effective in the monitoring role, which may lead to excessive CEO remuneration, thereby upsetting the shareholders. These factors create another research gap that this study can investigate.

Research on the relationship between say-on-pay voting and board characteristics has mainly been conducted at the board level, not the committee level. However, many decisions related to executive remuneration are made by the remuneration committee (e.g. Conyon and Peck, 1998; Daily et al., 1998). Thus, it is important to focus on the remuneration committee level, rather than the board level, when it comes to executive remuneration. Kent et al. (2016) made the first attempt to examine some characteristics of the remuneration committee and say-on-

pay voting in Australia. Specifically, Kent et al. (2016) investigated the impact of remuneration committee size and independence on shareholder dissent voting via say-on-pay votes and found mixed results. Following a few previous studies (e.g. Conyon and Peck, 1998; Daily et al., 1998), this research focuses on the remuneration committees and investigates whether the presence of female and foreign directors has an impact on shareholder dissent voting via the say-on-pay approach.

On the relationship between remuneration committee characteristics and CEO pay prospective, Bugeja et al. (2015) made the first attempt to address the issue of female directors on remuneration committees and their impact on CEO remuneration in the US. Specifically, Bugeja et al. (2015) found that the presence of women on firms' remuneration committees had a negative effect on CEO remuneration. Also, in the US, Masulis et al. (2012) was the first study to investigate whether a larger presence of foreign directors on remuneration committees led to higher CEO remuneration. Therefore, following Bugeja et al. (2015) and Masulis et al. (2012), this research examines the relationship between the presence of female and foreign directors on remuneration committees and CEO remuneration in the UK.

Although previous studies have investigated the links among the presence of a remuneration committee, the proportion of independent directors on the remuneration committee and executive remuneration (e.g. Conyon and Peck, 1998; Daily et al., 1998), there are other important remuneration committee characteristics that have yet to be explored, such as diversity.

In summary, this research is different from previous research in many ways. First, this study is the first to examine how a diverse remuneration committee, in terms of the inclusion of female and foreign directors, can impact shareholder dissent voting via the say-on-pay

approach. Additionally, this study investigates whether the presence of female and foreign directors on firms' remuneration committees has an effect on CEO pay in the UK.

3.5 Conclusion

This chapter is devoted to the literature review and is divided into two parts: the theoretical framework of corporate governance and the empirical work addressing previous studies in the area of say-on-pay voting, CEO remuneration, board diversity and board characteristics. The theoretical framework section covers the most significant theories in corporate governance literature, such as the agency theory, stakeholder theory, stewardship theory, critical mass theory and the resource dependence theory.

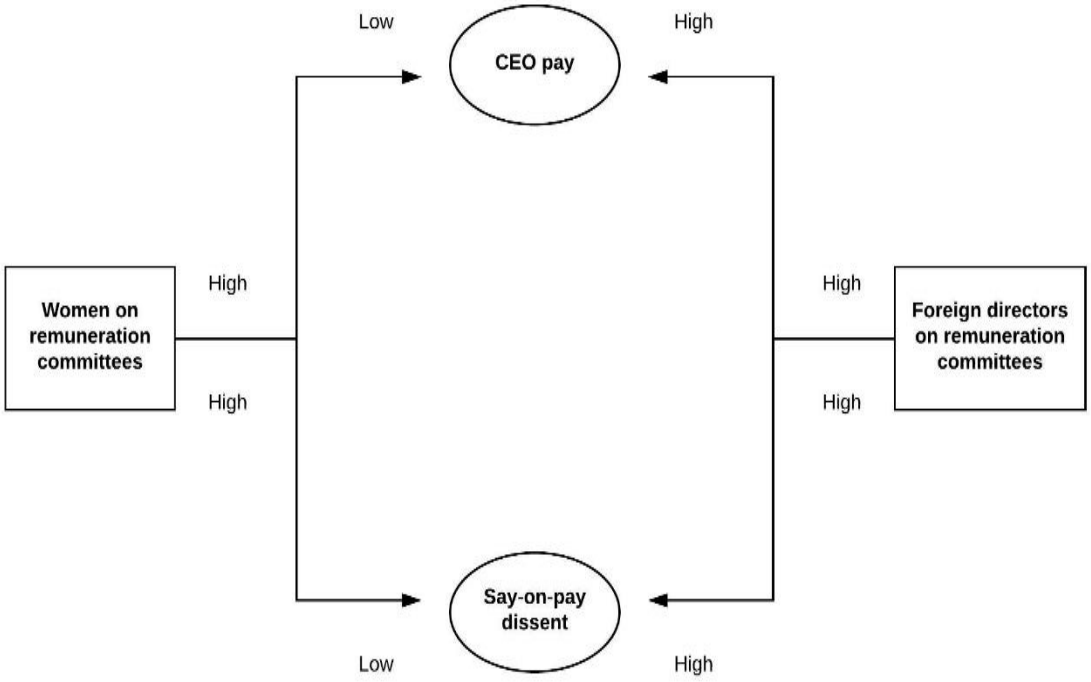
The empirical portion identifies and discusses previous studies that address the determinants and implications of say-on-pay voting. These studies found that higher CEO pay, poor firm performance, larger firm size and weak boardroom governance are the most prominent antecedents that impact say-on-pay dissent voting. Also, this chapter reports literature related to CEO remuneration, board diversity and other board characteristics. A common feature about these studies is a variation in results. The next chapter highlights the research hypotheses.

CHAPTER IV: RESEARCH HYPOTHESES DEVELOPMENT

4.1 Introduction

The previous chapter has highlighted the theoretical framework of corporate governance and the literature on say-on-pay, CEO remuneration and remuneration committee, board gender diversity, foreign directors and board characteristics. Addressing the theoretical and empirical literature helps to identify research gap and to pave the way for research hypotheses development. Therefore, this chapter aims to develop different hypotheses addressing the impact of women and foreign directors on CEO pay and say-on-pay dissent voting (see Figure 4.1 for the summary of hypotheses development). Higher women representation on remuneration committees is expected to lower CEO pay and say-on-pay dissent voting, whereas a higher presence of foreign directors on UK remuneration committees is assumed to lead to higher CEO pay and higher shareholder dissatisfaction via say-on-pay.

Figure 4.1 Hypotheses Development Structure



4.2 CEO Pay, Say-on-Pay and Women Directors on Remuneration Committees

The agency model addresses conflicts that may arise between management (agent) and shareholders (principals), where the agent may misuse the delegation given to them by the principals to make some decisions in their own self-interest (Jensen and Meckling, 1976). Prior studies of say-on-pay, building on the agency model, have argued that shareholders' dissent on the remuneration report is the result of high executive remuneration (e.g., Alissa, 2015; Conyon, 2016; Conyon and Sadler, 2010). The board of directors plays an internal role in mitigating such conflicts between agents and principals by monitoring and by advising management for example on strategic decisions (Fama and Jensen, 1983; Jensen and Meckling, 1976).

Adams and Ferreira (2009) and Carter et al. (2003) argue that gender diverse boards can enhance the monitoring role of the board. Previous studies have shown many reasons why women directors can be more effective monitors. For example, women on boards are more likely to be independent directors than male directors, and are thus more effective monitors (Adams and Ferreira, 2009; Carter et al., 2003). In addition, Pan and Sparks (2012) contend that women directors are firmer than male directors when it comes to implementing moral standards on the board. Furthermore, women directors are more likely to consider dubious business transactions unethical (Franke et al., 1997). Cumming et al. (2015) also find that women directors are less likely to commit fraud. Women directors are also stronger when it comes to implementing their fiduciary duties (Post and Byron, 2015). Additionally, women directors have been found to come to meetings better prepared than their male counterparts (Huse and Solberg, 2006) and to change the boardroom dynamics (Adams and Ferreira, 2009; Carter et al., 2003). Firms with more women on board encourage more effective board communication between the board and its stakeholders (Terjesen et al., 2009). Konrad et al. (2008) find that women directors are better listeners than male directors, more likely to raise

tough questions on remuneration matters and more willing ‘to put someone’s welfare before their own’ and thus, gender-diverse boards suffer less from groupthink (Chen et al., 2016).

Furthermore, a few recent studies show that women can increase the effectiveness of board sub-committees. Among them, Srinidhi et al. (2011) find that firms with more women on audit committees exhibit higher earnings quality which increases investor confidence in firms’ financial statements. Moreover, a recent study by Bugejia et al. (2015) finds that women on remuneration committees in the US lead to lower CEO pay and reduce excess CEO compensation.

Given that gender differences may be associated with more efficient monitoring due to different mind-sets, experiences, skills, knowledge and values, this research assumes that the presence of women on remuneration committees helps to decrease the chances of extremely high executive remuneration in order to align the interests of shareholders and managers. Shareholders are then more likely to be satisfied and hence they are more likely to vote in favour of remuneration reports via say-on-pay. Accordingly, the following two hypotheses are presented:

Hypothesis 1. The greater the presence of women on the remuneration committee, the lower the proportion of shareholder dissent votes via say-on-pay.

Hypothesis 2. The greater the presence of women on the remuneration committee, the lower the CEO pay.

Several studies on board diversity based on the critical mass theory contend that until women in a group reach a certain threshold, they are more likely to be marginalised (e.g. Joecks et al., 2013; Kanter, 1977; Konrad et al., 2008; Torchia et al., 2011). In particular, they argue that a single female director on a board largely dominated by male directors tends not to be trusted and is more likely to be viewed as a token (Torchia et al., 2011) and her influence on

board decision-making tends to be limited (Liu et al., 2014). Coherently, several recent studies show, for example, that only having three or more women directors on boards increases firm outcomes as only one or two are not sufficient (e.g. Joecks et al., 2013; Liu et al., 2014; Torchia et al., 2011).

Given that, this study also assumes that the presence of only one woman in a remuneration committee largely dominated by male directors may have no impact on say-on-pay dissent voting, but rather it suggests that when two or more[9] women directors sit on the remuneration committee, the more acceptable to shareholders the remuneration policy and then the lower the shareholders dissent votes via say-on-pay. Therefore, the following hypotheses are suggested:

Hypothesis 3. Firms with two or more women on their remuneration committees have a negative impact on shareholder dissent votes via say-on-pay.

Hypothesis 4. Firms with two or more women on their remuneration committees have a negative impact on CEO pay.

4.3 CEO Pay, Say-on-Pay and Foreign Directors on Remuneration Committees

Previous studies on say-on-pay have mainly used the agency model to address that the shareholders' dissent on the remuneration report is the result of high executive remuneration (Stathopoulos and Voulgaris, 2015; 2016). The agency model addresses conflicts that may arise between management (agent) and shareholders (principals) when the agent may misuse the delegation given to them by the principals to make decisions in their own self-interest (Jensen and Meckling, 1976). The board of directors plays an internal role in mitigating such

[9] Since no previous studies have used critical mass theory on board sub-committees, this research suggests that the critical mass (threshold) is 2 given size of the remuneration committee (mean of 4, see chapter 6).

conflicts between agents and principals by monitoring and advising management on strategic decisions (Fama and Jensen, 1983; Jensen and Meckling, 1976).

The presence of foreign directors on corporate boards also has pros and cons (Frijns et al., 2016; Masulis et al., 2012; Milliken and Martins, 1996). Foreign directors can provide their firms with valuable international expertise, which may benefit the firm; for example, if the firm has plans for expansion abroad (Estélyi and Nisar, 2016). However, Milliken and Martins (1996) argued that nationality diversity may lead to less effective communication and more misunderstanding between directors and therefore more conflicts among directors. Moreover, Masulis et al. (2012) have also shown that foreign directors on a corporate board are less effective in monitoring executive directors, leading to negative firm performance and excessive CEO remuneration. Specifically, Masulis et al. (2012) have provided several reason why foreign directors may lack effective monitoring. First reason is due to the geographic distance between the directors' home country and the local firms' headquarters. Second justification is that foreign directors have less access information about local companies (such as company's current operation and performance). Final reason is that foreign directors are less familiar with local country accounting rules and regulations. Hahn and Lasfer (2016) also argued that foreign directors seeing their roles as 'more advisory than monitoring'.

Therefore, this study assumes that the appointment of foreign directors to a board's remuneration committee can signal ineffective monitoring and higher CEO remuneration. Ultimately, this might result in decreased satisfaction among the firm's shareholders; hence, they might vote against the firm's remuneration report. Thus, the following two hypotheses are proposed:

Hypothesis 5. The greater the presence of foreign directors on UK remuneration committees, the higher the proportion of shareholder dissent votes via say-on-pay.

Hypothesis 6. The greater the presence of foreign directors on UK remuneration committees, the higher the CEO pay.

Several board diversity studies based on the critical mass theory have argued that minority groups are more likely to be marginalised by the dominant group, not trusted and viewed as a token (Kanter, 1977; Torchia et al., 2011). However, as the size of minorities grows to a certain threshold, they will gain more trust and will have increased influence on decision making (Kanter, 1977). Studies based on the critical mass theory have mainly addressed gender diversity; more specifically, they have investigated whether having three or more women directors on boards increases firm outcomes, as only one or two is insufficient (e.g. Joecks et al., 2013; Liu et al., 2014; Torchia et al., 2011). Therefore, this research assumes that the presence of only one foreign director in a remuneration committee largely dominated by local directors may have no impact on say-on-pay dissent voting; however, it is suggested that when two or more foreign directors sit on the remuneration committee, the less acceptable the remuneration policy will be to shareholders, resulting in more shareholder dissent votes via say-on-pay. Therefore, the following hypothesis is suggested:

Hypothesis 7. Firms with two or more foreign directors on their remuneration committees are associated with higher shareholder dissent votes via say-on-pay.

Hypothesis 8. Firms with two or more foreign directors on their remuneration committees are associated with higher CEO pay.

4.4 Conclusion

This chapter has highlighted the development of research hypotheses. In total eight hypotheses have been constructed to meet the main objectives of this research. The first hypothesis relates to the relationship between the presence of female directors on firms' remuneration committees and CEO pay. The second hypothesis addresses the impact of

female directors on remuneration committees on shareholder dissent via say-on-pay voting. Similarly, Hypothesis 3 tests the impact of two or more women on remuneration committees on say-on-pay dissent voting. The relationships between foreign directors on remuneration committees and CEO pay and say-on-pay voting are investigated in Hypotheses 4 and 5, respectively. Finally, Hypothesis 6 examines whether two or more foreign directors on remuneration committees have an influence on say-on-pay dissent voting.

CHAPTER V: RESEARCH METHODOLOGY

5.1 Introduction

The previous chapter highlighted this study's research hypotheses. This chapter's main purpose is to explore the research methodology implemented. First, the chapter highlights the study's general research design and philosophy. Next, the chapter provides a full description of the data and study period. The chapter's third section is devoted to defining the dependent and independent variables investigated, while the final section describes the statistical techniques used in this study.

5.2 Research Design and Philosophy

A research design is a plan for collecting, measuring and analysing data (Gray, 2014). There are mainly three types of research designs: quantitative, qualitative or mixed methods. Distinguishing between quantitative and qualitative is based on the kind of information used to address a phenomenon; quantitative research uses mainly numbers and figures (numeric information), whereas qualitative research relies on words, sentences and narratives (non-numeric information; Blumberg et al., 2014). However, this distinction is extremely narrow. Thus, determining which research design is more appropriate is dependent on associations to philosophical assumptions (Creswell, 2014). Qualitative research primarily follows interpretivism (Denzin and Lincoln, 2005), whereas quantitative research follows positivism (Saunders et al., 2012). The basic difference between interpretivism and positivism is that the positivist researcher sees the world as external and objective, whereas the interpretivist researcher believes the world is socially constructed and subjective (Gray, 2014). In interpretivism, the researcher focuses on meanings (opinion-seeking), as opposed to positivism, in which the researcher focuses on facts (truth-seeking). Additionally, positivism

follows a deductive approach (testing theory); however, interpretivism follows the inductive approach (generation of theory; Bryman, 2012).

This research uses the quantitative approach for several reasons. First, this research utilises secondary panel data collected from well-known databases; therefore, it is more appropriate to use a quantitative approach. For example, most of the data required for answering the research questions involve voting, the characteristics of the board and financial information, and it is difficult to obtain these data using a qualitative approach. Second, this research uses longitudinal data from 2003 to 2015; therefore, it is impracticable to use a qualitative approach. Furthermore, as shown in chapter three, most of the previous research in this area of corporate governance used a quantitative methodology (also, see Boyd et al., 2017).

5.3 Data and Sample Period

This research uses unbalanced panel data from the UK's FTSE 350 non-financial firms over the period spanning 2003–2015. Panel data is defined as a pool of cross-sectional observations performed over different time periods (Baltagi, 2001). Using panel data has many benefits, such as controlling for individual heterogeneity, being more informative, having less collinearity between variables and enjoying a greater degree of freedom (Baltagi, 2001). Boyd et al. (2017) find that 58% of corporate governance research[10] in 2015 used panel data. The UK FTSE 350 index includes the largest companies in the UK and represents approximately 97% of the UK's market capitalisation. This study excludes financial firms (including banks, investment, insurance, real estate and financial institution firms) due to many reasons. First, financial firms are heavily regulated and have different financial reporting formats. Financial firms also have different governance arrangements (Goh and Gupta, 2016). Furthermore, financial firms are known for their high executive remuneration,

[10] Research published in the Corporate Governance: An International Review (CGIR).

which may skew the results (Bugeja et al., 2015). Table 5.1 shows the summary of sample size by year and industry.

A significant reason for choosing the period 2003 - 2015 is that the availability of shareholder voting data on say-on-pay began in the financial year ending in 2003. This period also witnessed many reforms in the UK corporate governance regime, such as the Higgs Report (2003), the Walker Review (2009), the Stewardship Code (2010) and the Davies Report (2011), as well as a major financial crisis in 2007.

After excluding financial firms and firms with missing voting data, this study's final sample comprised 2,935 firm-year observations. This study uses multiple data sources. Boyd et al. (2017) report that 75% of papers published in the CGIR utilised multiple data databases. Data on shareholder voting on directors' remuneration were obtained from Manifest Information Services Ltd. Data on remuneration committee characteristics (such as the number of women, nationality of directors, size of committee and proportion of independent directors), CEO compensation and other board characteristics were collected from the BoardEx database. Institutional ownership data were obtained from the Thomson Reuters Eikon database, whereas financial data (such as total assets, sales, return on assets and stock returns) came from Thomson Reuters DataStream.

5.4 Models and Research Variables of the Study

This section illustrates models used for the empirical study and identifies the study's dependent and independent variables. Table5.2summarises the research variables the current study used. The proceeding sub-sections provide more details about the models and research variables.

Table 5.1 Summary of Sample Size by Year and Industry

	2003	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**Total**
Initial sample-FTSE 350	350	350	350	350	350	350	350	350	350	350	350	350	350	4550
Financial firms and missing data	172	142	122	115	118	112	111	112	112	121	118	123	137	1615
Net sample by year	178	208	228	235	232	238	239	238	238	229	232	227	213	2935
Basic Materials	12	12	15	15	16	18	19	20	26	27	24	22	19	244
Industrials	52	62	69	69	68	70	69	64	63	62	64	60	58	830
Health Care	8	9	11	13	12	12	12	11	10	11	12	14	14	149
Oil and Gas	12	12	15	16	15	15	16	16	16	13	13	13	11	183
Consumer Services	50	62	63	69	71	72	70	73	70	66	69	69	66	870
Consumer Goods	22	24	24	25	23	24	25	24	22	22	24	26	26	311
Technology	11	14	16	15	15	15	16	16	16	14	13	10	6	177
Telecommunications	2	2	3	3	3	3	4	6	7	7	6	6	6	58
Utilities	10	11	12	10	9	9	8	8	8	7	7	7	7	113
Net sample by industry	178	208	228	235	232	238	239	238	238	229	232	227	213	2935

Table 5.2 Summary of Research Variables

Sr	Variable	Definition	Source	Model
Say-on-Pay Variables				
1	Log dissent	Total number of shareholders against votes on the remuneration report divided by the total number of votes cast (transferred using $\ln\left(\frac{\text{Dissent}_{it}}{1-\text{Dissent}_{it}}\right)$).	Manifest	1
2	Dissent > 10%	An indicator variable of 1 if the dissent voting is greater than 10%, 0 otherwise.	Manifest	1
CEO Pay Variables				
3	Log total CEO pay	Natural logarithm of total CEO remuneration which includes cash, and equity linked remuneration.	BoardEx	1 & 2
4	Log CEO cash pay	Natural logarithm of CEO's salary, bonus and other annual cash compensation.	BoardEx	2
5	Log CEO equity	Natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted).	BoardEx	2
6	Log CEO bonus	Natural logarithm of CEO's bonus remuneration.	BoardEx	2
Main Variables				
7	Women %	Total number of women directors over the remuneration committee size.	BoardEx	1 & 2
8	Foreign directors %	Total number of foreign directors over the remuneration committee size.	BoardEx	1 & 2
9	Women = 1	An indicator variable of 1 if a remuneration committee has only one woman, 0 otherwise.	BoardEx	1
10	Women ≥ 2	An indicator variable of 1 if a remuneration committee has two or more women, 0 otherwise.	BoardEx	1
11	Foreign director = 1	An indicator variable of 1 if a remuneration committee has only one foreign director, 0 otherwise.	BoardEx	1
12	Foreign directors ≥ 2	An indicator variable of 1 if a remuneration committee has two or more foreign directors, 0 otherwise.	BoardEx	1
Control Variables				
13	Institutional ownership %	Percentage of shares held by institutional investors holding more than 3% of the firm's equity.	Eikon	1 & 2
14	Board size	Total number of directors on the board.	BoardEx	1 & 2
15	Remuneration committee size	Total number of directors on the remuneration committee.	BoardEx	1 & 2

16	Board independence %	Fraction of non-executive independent directors.	BoardEx	1 & 2
17	Remuneration committee independence %	Fraction of independent, non-executive directors on the remuneration committee.	BoardEx	1 & 2
18	CEO duality	An indicator variable of 1 if the CEO is both the CEO and a chair of the firm, 0 otherwise.	BoardEx	1 & 2
19	Log CEO tenure	Natural logarithm of number of years a CEO serve on board.	BoardEx	2
20	Log total sales	Natural log of firms' total returns.	DataStream	1 & 2
21	Foreign sales %	Percentage of total sales that come from a foreign country's operation.	DataStream	2
22	Return on assets (ROA)	An accounting measure of firm performance and measured as firms' income before extraordinary items divided by total assets.	DataStream	1 & 2
23	Stock return %	A market measure of firm performance and defined as is stock price appreciation plus dividends.	DataStream	1 & 2
24	Market to book value (MBV)	Average equity market value divided by total book value of equity.	DataStream	1 & 2
25	Leverage %	Total debt to total assets.	DataStream	1 & 2
26	Price volatility %	Stock's average annual price movement to a high and low from a mean price for each year.	DataStream	1 & 2
Time and industry controls				
27	Post 2007	An indictor to account for the impact of financial crisis.		1 & 2
28	Post 2010	An indictor to account for the impact of Stewardship Code.		1 & 2
29	Post 2011	An indictor to account for the impact of Davies Report (2011).		1 & 2
30	Post 2013	An indictor to account for the impact of say-on-pay mandatory and binding voting		1 & 2
31	Year dummies	An indictor to control macroeconomic shocks over study period.		1 & 2
32	Industry dummies	An indictor to control inter-industry specific effects	DataStream	1 & 2

5.4.1 Models

This study uses the following panel data model to investigate the impact of women and foreign directors on remuneration committees regarding say-on-pay dissent voting and CEO remuneration.

$$Dissent_{it} = \alpha + \beta_1\, women_{it} + \beta_2\, foreign\ directors_{it} + \beta_{3-17} Controls_{it} + \epsilon_{it} \qquad (1)$$

$$CEO\ Pay_{it} = \alpha + \beta_1\, women_{it} + \beta_2\, foreign\ directors_{it} + \beta_{3-17} Controls_{it} + \epsilon_{it} \qquad (2)$$

5.4.2 Definitions of dependent variables

The dependent variable in model (1) is shareholder dissent via say-on-pay (Dissent), which is measured as the total number of shareholders' against votes on the remuneration report divided by the total number of votes cast (Conyon and Sadler, 2010). As stated by Conyon (2016), the OLS estimator alone is inappropriate, as it only predicts probabilities outside the range of zero to one. Conyon (2016) has suggested a logistic transformation to Dissent in the above model and then estimating using OLS. Thus, Dissent in model (1) has been transferred to: $Log\ Dissent_{it} = \ln\left(\frac{\text{Dissent}_{it}}{1-\text{Dissent}_{it}}\right)$. An alternative way to overcome the problem is to use the logistic model of the generalised linear model. Therefore, this study uses another measure for the shareholder dissent vote and follows the method of Gregory-Smith et al. (2014), using a 10% dissent cut-off. Thus, this study defines Dissent on model (1) as an indicator variable of 1 if the dissent voting is greater than 10% (*Dissent > 10%),* and the indicator variable is 0 if otherwise.

In model (2), the dependent variable is CEO remuneration (CEO pay). This study measures CEO pay using different measures, following Bugeja et al. (2015) and Masulis et al. (2012). The first measure is the *log total CEO pay,* which is the natural logarithm of total CEO remuneration, including cash, and equity-linked remuneration. *Log CEO cash pay* is the

second measure of CEO pay and is defined as the natural logarithm of the CEO's salary, bonuses and other annual cash compensation. The third measure of CEO pay is *log CEO equity*, which is the natural logarithm of the CEO's equity-linked remuneration (restricted stock and options granted). The final measure of CEO pay is *log CEO bonus pay*, which is the natural logarithm of the CEO's bonus remuneration.

5.4.3 The main independent variables

The main independent variable in models (1) and (2) is the presence of women and foreign directors on remuneration committees, which is measured as follows:

- *Women* is defined as the proportion of the total number of women directors over the remuneration committee size.
- *Foreign directors* is measured as the proportion of the total number of foreign directors over the remuneration committee size.

In model (1), this study also measures firms with one woman or one foreign director on their remuneration committees and firms with two or more women or foreign directors. Hence, the following additional measures are suggested:

- *Women = 1* is an indicator variable of 1 if a remuneration committee has only one woman, and the indicator variable is 0 if otherwise.
- *Women* ≥ 2 is an indicator variable of 1 if a remuneration committee has two or more women, and the indicator variable is 0 if otherwise.
- *Foreign director = 1* is an indicator variable of 1 if a remuneration committee has only one foreign director, and the indicator variable is 0 if otherwise.
- *Foreign directors* ≥ 2 is an indicator variable of 1 if a remuneration committee has two or more foreign directors, and the indicator variable is 0 if otherwise.

5.4.4 Control variables

Based on previous say-on-pay and CEO-pay literature, models (1) and (2) include different control variables. These variables include corporate governance and firm characteristics, which are summarised as follows:

- *Log CEO pay* is a natural log of the total remuneration, which is the sum of cash remuneration and equity-linked pay. Previous studies have found that higher CEO remuneration leads to higher say-on-pay dissention (e.g. Alissa, 2015; Carter and Zamora, 2008; Conyon and Sadler, 2010; Gregory-Smith et al., 2014; Ferri and Maber, 2013). This variable is used as another explanatory variable in model (1).
- *Institutional ownership* is the percentage of shares held by institutional investors holding more than 3% of the firm's equity. Ownership structure is found to be another important element in controlling executive directors' remuneration (Bebchuk and Fried, 2003). Shareholders with large ownership stakes and institutional investors have more incentives to monitor executive directors effectively (van Essen et al., 2015). Many previous studies have shown that an effective ownership structure (e.g. higher concentrated ownership and higher institutional ownership) led to less CEO remuneration (e.g. Benz et al., 2001; Bertrand and Mullainathan, 2000; Hartzell and Starks, 2003; van Essen et al., 2015). For example, Bertrand and Mullainathan (2000) used data from 51 of the largest US oil firms from 1977 to 1994 and found that firms with lower concentrated ownership had CEOs who were more likely to get higher 'lack' remuneration. Similarly, Benz et al. (2001) reported that companies with higher concentrated ownership had fewer options-based remuneration. As for say-on-pay literature, it is expected that the greater institutional ownership, the more shareholders will dissent on say-on-pay (Conyon, 2016). Additionally, previous CEO-pay literature reported that firms with more institutional ownership are less likely to have higher

CEO remuneration (e.g. Hartzell and Starks, 2002; Ozkan, 2007; van Essen et al., 2015).

- *Board size* is the total number of directors on the board. Large boards are subject to more coordination problems (Jensen, 1993; Yermack, 1996), which shareholders may view negatively (Conyon, 2016; Sauerwald et al., 2016). Firms with larger board sizes also tend to have higher CEO remuneration (e.g. Core et al., 1999; Ozkan, 2007; van Essen et al., 2015). Specifically, in the US, Armstrong and Ittner (2012) found that firms with larger board size were more likely to have higher executive remuneration. Similarly, van Essen et al. (2015) used a meta-analysis of 219 US studies that investigated the determinants of CEO remuneration and found that larger board size had positive influence on CEO pay. In contrast, Ryan and Wiggins (2004), in the US, found that firms with larger board size tended to have lower CEO remuneration.
- *Remuneration committee size* is the total number of directors on the remuneration committee.
- *Board independence* is the fraction of non-executive independent directors. Boards with more independent directors are perceived to be more able to monitor self-interested CEOs (Fama and Jensen, 1983). Therefore, shareholders may view independent boards positively, as such boards provide more effective monitoring (Conyon, 2016; Sauerwald et al., 2016). On the other hand, Coles et al. (2014) investigated the reasons why not all independent directors were effective monitors and why their presence on boards may have led to higher CEO remuneration using a data set from US companies from 1996 to 2010. Coles et al. (2014) defined all independent directors who had been selected by the CEO (when the CEO was present on the remuneration committee) as ‘co-opted’ directors. These researchers found that firms with higher co-opted directors tended to have higher CEO pay. This result is

consistent with a previous finding by Shivdasani and Yermack (1999), who also found that involvement of CEOs in selecting independent directors can lead to higher CEO entrenchment.

- *Remuneration committee independence* is the fraction of independent, non-executive directors on the remuneration committee. Many decisions related to executive remuneration are made by the remuneration committee (Daily et al., 1998). A few previous studies examined the characteristics of remuneration committees possibly associated with CEO remuneration. For example, Conyon and Peck (1998) reported that the independence of remuneration committees in the UK had a limited effect on executive pay. Furthermore, in the UK, Gregory-Smith (2012) found no support for the relationship between the independence of the remuneration committee and CEO remuneration. Similarly, in the US, Daily et al. (1998) found no evidence that the independence of the remuneration committee affected CEO pay.
- *CEO duality* is an indicator variable of 1 if the CEO is both the CEO and a chair of the firm, and the indicator variable is 0 if otherwise. Prior say-on-pay literature has found that CEO duality leads to more shareholder dissent via say-on-pay voting (Conyon, 2016). Core et al. (1999) argued that CEO duality increases the CEO power over executive remuneration determination. Previous CEO-pay studies have found that firms with CEO duality tend to have higher CEO remuneration (Armstrong and Ittner, 2012; Core et al., 1999; Cyert et al., 2002; van Essen et al., 2015). However, Conyon and Peck (1998) found that CEO duality has no influence on CEO remuneration.
- *Log total sales* is a natural log of firms' total returns. This variable has been used to proxy firm size (e.g. Alissa, 2015; Conyon and Sadler, 2010; Ferri and Maber, 2013). Larger firms are more visible than small firms and, thus, are more subject to be

targeted by shareholders (Cai and Walkling, 2011). Furthermore, firm size reveals the complexity of large firms' activities and operation (Goh and Gupta, 2016; Murphy, 1999). Therefore, firm size is found to be one of the most important determinants of CEO remuneration (Conyon, 1997). This may suggest that large companies are more likely to pay their CEOs more (Core et al., 1999), as the labour market for talented and experienced CEOs is extremely competitive (Conyon et al., 2016).

- *Return on assets (ROA)* is an accounting measure of firm performance and is measured as firms' income before extraordinary items divided by total assets. Previous studies have found that shareholders are more likely to vote against say-on-pay when firm performance is low (e.g. Alissa, 2015; Conyon, 2016; Ferri and Maber, 2013). However, prior CEO-pay studies have found that firms with higher performance pay their CEOs more (Masulis et al., 2012; van Essen et al., 2015).
- *Stock return* is a market measure of firm performance and is defined as stock price appreciation plus dividends. It is expected that less stock return leads to more shareholder dissent via say-on-pay (Conyon, 2016).
- *Market to book value (MBV)* is average equity market value divided by total book value of equity. This measure is used to control for future expected financial performance (Sauerwald et al., 2016).
- *Leverage* is defined as the proportion of total debt to total assets. Leverage ratio is used as a proxy for firm risk. Harris and Raviv (1979) addressed that firm leverage affect the determination of executive remuneration. Also, Jensen (1986) reported that higher leverage might lead firm not perform well.
- *Price volatility* is a stock's average annual price movement to a high and low from a mean price for each year. Masulis et al. (2012) have used stock price volatility as a

proxy for firm risk. Masulis et al. (2012) argued that a CEO may demand higher remunerations for taking extra firm risk.

In addition, the following two control variables are used for model (2), based on prior studies:

- *Log CEO tenure* is the natural logarithm for the number of years a CEO served on a board. Prior literature has used CEO tenure to control for CEO power, suggesting the longer the CEO stayed on the board, the higher power the CEO may have over CEO pay determinations (Armstrong and Ittner, 2012; Bugeja, et al., 2015; Ozkan, 2007). Also, Hill and Phan (1991) argued that CEOs' longer tenure may lead them to exercise more control over the remuneration setting process in line with their preferences. Accordingly, CEOs respect, confidence, and vision is acquired consistent with the managerial power view of imposing more influence over the level and structure of their pay packages.
- *Foreign sales* are defined as the percentage of total sales that come from a foreign country's operation (Masulis et al., 2012). Specifically, Masulis et al. (2012) have used this measure, as companies with foreign operations may require talented and experienced CEOs. Thus, these CEOs may require higher remunerations 'for managing more complex and geographically dispersed operations'. Masulis et al. (2012) found a significant and positive relationship between foreign sales and CEO pay.

5.4.5 Time and industry control variables

Finally, models (1) and (2) also contain different time events and industry control dummy variables:

- *Post-2007* is an indictor to account for the impact of the 2007 financial crisis.

- *Post-2010* is an indictor to account for the impact of the Stewardship Code. The UK Stewardship Code was published in 2010, aiming to enhance institutional investors' engagement with their investee companies. Thus, it is expected that the higher the shareholder engagement, the higher say-on-pay dissent voting and the lower the CEO pay.
- *Post-2011* is an indictor to account for the impact of the Davies Report (2011), which addressed women being under-represented on UK corporate boards. After the publication of the Davies Report (2011), the number of women in boardrooms has seen a dramatic increase.[11]
- *Post-2013* accounts for the impact of say-on-pay mandatory and binding voting. From 2002-2012, UK shareholders had an advisory vote on the director remuneration report; however, in 2013, the UK introduced a binding vote on executive remuneration policy.
- *Year dummies* is set to control macroeconomic shocks over the study period (Conyon, 2016).
- *Industry dummies* is set to control inter-industry specific effects in say-on-pay voting and CEO pay (Armstrong and Ittner, 2012; Conyon, 2016; Conyon and Sadler, 2010).

5.5 Statistical Techniques of the Study

This section aims to illustrate the statistical techniques used in models (1) and (2). In model (1), two statistical techniques are used: ordinary least square (OLS) and logistic model (logit). In addition, propensity score matching is used to control the endogeneity of self-selection and causality problems in model (1), whereas the OLS model with logistic transformation of the dependent variable is used as a main estimation for model (2). Also, propensity score

[11] See Chapter Six for results.

matching and two-step GMM are used to control for the endogeneity problem in model (2). The following sub-sections explain the specifications of these statistical techniques.

5.5.1 OLS and logit models

OLS is a liner probability model where the dependent variable is mainly continuous. The OLS model is simple to estimate but has some drawbacks (Baltagi, 2008; Greene, 2008; Wooldridge, 2016). The OLS model's main limitation is that it predicts probabilities outside the range between zero and one (error term in the OLS is not normally distributed), which is perceived as an inappropriate estimation (Baltagi, 2008; Greene, 2008; Papke and Wooldridge, 1996; Wooldridge, 2016), and the partial impact of any independent variable is constant (Wooldridge, 2016).

These OLS drawbacks can be overcome using different treatments. First, Greene (2008) has recommended using a logistic transformation of variables and then estimating using OLS. Using the robustness of standard errors after running the OLS model is another ideal solution for the non-normality problem (Baltagi, 2008; Wooldridge, 2016). In addition, the OLS limitations can be resolved using a binary outcome model (Baltagi, 2008; Cameron and Trivedi, 2010; Greene, 2008; Wooldridge, 2016). The logit model is one of the binary outcome models, which uses a binomial as the family function (Conyon, 2016), and the dependent variable is categorical (binary 0 or 1). The logit model does not require the error term to be normally distributed (Ohlson, 1980). Moreover, Boyd et al. (2017) report that there is an increasing numbers of corporate governance research employed logit or probit models.

5.5.2 Propensity score matching

Propensity score matching is one of the techniques used to deal with the endogeneity problem researchers face. Rosenbaum and Rubin (1983) were the first to develop propensity score matching. Li (2013) reported that the main purpose of using propensity score matching is to

mitigate the self-selection problem or bias related to different density weights with the OLS and logit models. Li (2013) defined a propensity score as 'the probability of study participants receiving a treatment based on observed characteristics'. According to Greene (2008), 'individuals with similar propensity scores are paired and the average treatment effect is then estimated by differences in outcomes'.

In this research context, the identification strategy for propensity score matching is to find firms with identical characteristics, such as firm size, the number of women directors on the board and corporate governance characteristics and then compare the impacts of firms with women and firms without women on their remuneration committees regarding the firms' say-on-pay and CEO pay.

5.5.3 Two-system GMM model

Two-step generalised method of moments (two-system GMM, hereafter) is designed for panel analysis and, as reported by Roodman (2009), is ideal under the following circumstances: (1) when there is a large number of observations but a short time period; (2) when there is 'a linear functional relationship'; (3) when the dependent variable is dynamic; (4) when the 'independent variables are not strictly exogenous, meaning they are correlated with past and possibly current realizations of the error'; (5) when there are 'fixed individual effects'; and finally, (6) when there is 'heteroskedasticity and autocorrelation within individuals but not across them'. Two-system GMM has been used in CEO-pay studies to address potential endogeneity problems (e.g. Gregory-Smith, 2012; Schultz et al. 2010). Therefore, this study also uses two-system GMM for model (2) to control for endogeneity problems.

5.6 Data winsorising and statistical software

This study uses 98% winsorisation technique to avoid the possibility that this research results might affect by extreme observations and outliers. More specifically, the set of variables which are under 1% are set to the 1% level and those above 99% are set to the 99% level.

As for statistical software package, this research uses Stata 14 software. Stata is generally the main statistical software used by academicians and researchers to store, manage, manipulate, and analyse panel data.

5.7 Conclusion

This chapter details the study's research methodology. The chapter opened by explaining the study's research design and the philosophy implemented. Specifically, this research follows positivism and uses a quantitative research approach due to the nature and availability of the data required. Second, this chapter described the study's data and sample period; FTSE 350 non-financial companies over a period of 12 years (2003-2015) were used in this study. Thus, different types of data were collected, including say-on-pay voting data, CEO remuneration data, corporate governance data and firm characteristics data. Say-on-pay data were collected from the Manifest database; CEO remuneration and corporate governance characteristics were collected from BoardEx; firm characteristics were obtained from DataStream; and institutional ownership data were collected from Eikon.

Third, this chapter reported the two models investigated in this study; the first model examines the presence of women and foreign directors on remuneration committees and the impact on say-on-pay dissent voting, whereas the second model addresses the relationship between the presence of women and foreign directors on remuneration committees and CEO pay. Fourth, this chapter explained the measurement of the dependent, independent and control variables. The main dependent variables in this study are say-on-pay dissent voting in

model (1) and CEO remuneration in model (2), while the main independent variable in models (1) and (2) is the presence of women and foreign directors on remuneration committees. In both models, there were different control variables, including corporate governance and firm characteristics.

Finally, this chapter illustrates the statistical techniques used in this research. Model (1) is addressed using the OLS model with logistic-transferred dependent variables and the logit model, whereas model (2) investigated using the OLS model with logistic-transferred dependent variables. Propensity score matching and two-system GMM are used to control for endogeneity problems.

CHAPTER VI: RESULTS ANALYSIS AND DISCUSSION

6.1 Introduction

The previous chapter explained the research methodology, data and variables used in this research. This chapter aims to analyse and discuss the research findings. First, this chapter discusses descriptive statistics and trends of UK boards since 2003 (e.g. board size, board independence, CEO duality and board diversity), CEO remuneration and say-on-pay. This chapter's second section discusses correlation analyses, which includes testing all research variables for autocorrelation and multi-collinearity problems. The final part of this chapter includes an analysis and discussion of empirical results.

6.2 Time Series and Industry Analysis of UK Board Characteristics

This section presents the evolution of board of directors' characteristics by year and by industry for the UK's FTSE350 firms from 2003 to 2015. Table 6.1 shows the summary of the time series descriptive statistics of each board characteristic. This section is organised by discussing the development of each board characteristic separately.

6.2.1 Board size

The UK Corporate Governance Codes (2010, 2012, 2014 and 2016) state that 'The board should be of sufficient size that the requirements of the business can be met and that changes to the board's composition and that of its committees can be managed without undue disruption, and should not be so large as to be unwieldy'. Table 6.1 shows that the average board size for the entire sample period is 9.06 board members, where 18 was the maximum board size and five was the minimum board size recorded during the sample period.

Table 6.1 Time Series Descriptive Statistics of Board Characteristics for FTSE 350 Non-Financial Firms from 2003 to 2015

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Board Size														
Mean	9.33	9.15	9.16	9.09	9	8.93	8.8	8.89	9.06	9.14	9.16	9.1	9.09	9.06
Median	9	9	9	9	9	9	8	9	9	9	9	9	9	9
SD	2.61	2.42	2.47	2.5	2.42	2.41	2.39	2.34	2.41	2.34	2.24	2.2	2.01	2.37
Min	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Max	18	18	18	18	18	18	17	17	17	16	17	17	15	18
N	177	207	227	234	231	237	238	237	237	228	231	226	211	2921
Executive Directors %														
Mean	42	40.9	38.7	37.7	37	36	35.5	34.6	33.4	32.4	30.3	29.2	28.6	35
Median	42.9	40	38.5	37.5	37.5	33.3	33.3	33.3	33.3	33.3	28.6	28.6	25	33.3
SD	11.4	12	10.9	11.4	11.1	11.4	11.3	10.5	10.9	10	10.2	10.8	10.1	11.6
Min	15.4	14.3	11.1	11.1	11.1	9.09	7.14	9.09	8.33	0	0	0	0	0
Max	83.3	83.3	66.7	69.2	66.7	71.4	64.7	64.7	66.7	60	60	62.5	57.1	83.3
N	177	207	227	234	231	237	238	237	237	228	231	226	211	2921
Non-executive non-independent directors %														
Mean	9.51	8.89	9.41	9.49	9.19	9.19	8.61	8.65	9.61	8.2	8.6	9.19	9.48	9.07
Median	0	9.09	9.09	9.09	9.09	9.09	8.33	8.33	9.09	8.01	7.69	7.69	9.09	9.09
SD	12.2	10.6	9.91	10.3	10.1	10.1	9.81	10	11.4	10	10.8	11.9	11.3	10.6
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	55.6	50	46.2	50	50	50	44.4	44.4	60	50	50	54.5	54.5	60
N	177	207	227	234	231	237	238	237	237	228	231	226	211	2921
Non-executive independent directors %														
Mean	48.2	49.9	51.6	52.6	53.6	54.5	55.7	56.5	56.8	59.1	60.8	61.4	61.6	55.7
Median	50	50	50	53.8	54.5	55.6	55.6	57.1	57.1	60	60.8	62.5	62.5	57.1
SD	13.7	12.5	12.4	13.6	12.6	12.9	12.6	13.1	14	12.3	11.9	13.3	12.8	13.5
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	81.8	80	80	88.9	81.8	90.9	92.9	90.9	91.7	92.3	92.3	92.9	91.7	92.9
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
CEO duality														
Mean	0.213	0.207	0.189	0.145	0.134	0.126	0.134	0.113	0.113	0.109	0.069	0.0925	0.0708	0.13
Median	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 6.1 Continued														
SD	0.411	0.406	0.392	0.353	0.341	0.333	0.341	0.318	0.318	0.313	0.254	0.29	0.257	0.337
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	1	1	1	1	1	1	1	1	1	1	1	1	1	1
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
Institutional ownership %														
Mean	32.2	33.2	35.4	35.2	36.4	37.6	38.7	38.1	38.5	36.1	33.8	32.8	33.2	35.6
Median	30	34	33	32.8	35.1	39	37.2	37.4	37.9	35.2	32.1	31.2	30.8	34.1
SD	21	19.7	20.7	19.9	20.5	20.6	21	21.4	22.2	20.7	21.1	19.4	19.8	20.7
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	92.7	85.6	93.6	90.3	99	98	99	97	96.3	92.4	99	87.6	93.9	99
N	173	203	224	231	230	236	238	238	238	229	232	227	208	2907
Women on board %														
Mean	5.2	5.46	6.19	7.13	7.77	7.66	7.62	8.62	10.4	13.1	15.8	18.9	20.8	10.4
Median	0	0	0	0	0	6.9	7.14	9.09	11.1	12.5	14.3	20	22.2	10
SD	7.98	8.04	8.46	8.92	9.94	9.22	8.68	8.88	9.29	9.97	9.19	9.46	9.39	10.3
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	37.5	37.5	42.9	50	57.1	50	37.5	37.5	37.5	44.4	37.5	44.4	50	57.1
N	178	208	228	235	232	238	238	238	238	229	232	227	212	2934
Foreign director on board %														
Mean	19.3	18.6	17.9	18.3	19.2	19.5	19.8	20.9	23	24.3	25.4	26.9	27.4	21.6
Median	12.5	11.1	11.1	12.5	12.5	12.5	12.5	14.3	15.4	17.4	20	22.2	22.2	14.3
SD	20.9	21.3	20.8	21.3	21.6	22	22.2	22.3	22.9	23.4	23.3	23.9	24.9	22.6
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	88.9	75	85.7	85.7	87.5	87.5	88.9	88.9	88.9	88.9	90.9	92.3	92.3	92.3
N	177	207	227	234	231	237	238	237	237	228	231	226	211	2921

Note that Board size is total number of directors in the board. Executive directors is proportion of executive directors in the board. Non-executive non-independent directors is proportion of non-executive non-independent directors in the board. Non-executive independent directors is proportion of independent non-executive directors in the board. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Women on board is proportion of women directors from total number of directors in the board. Foreign directors is proportion of non-British directors from total number of directors in the board.

Figure 6.1 Board Size for FTSE 350 Non-Financial Firms (2003-2015)

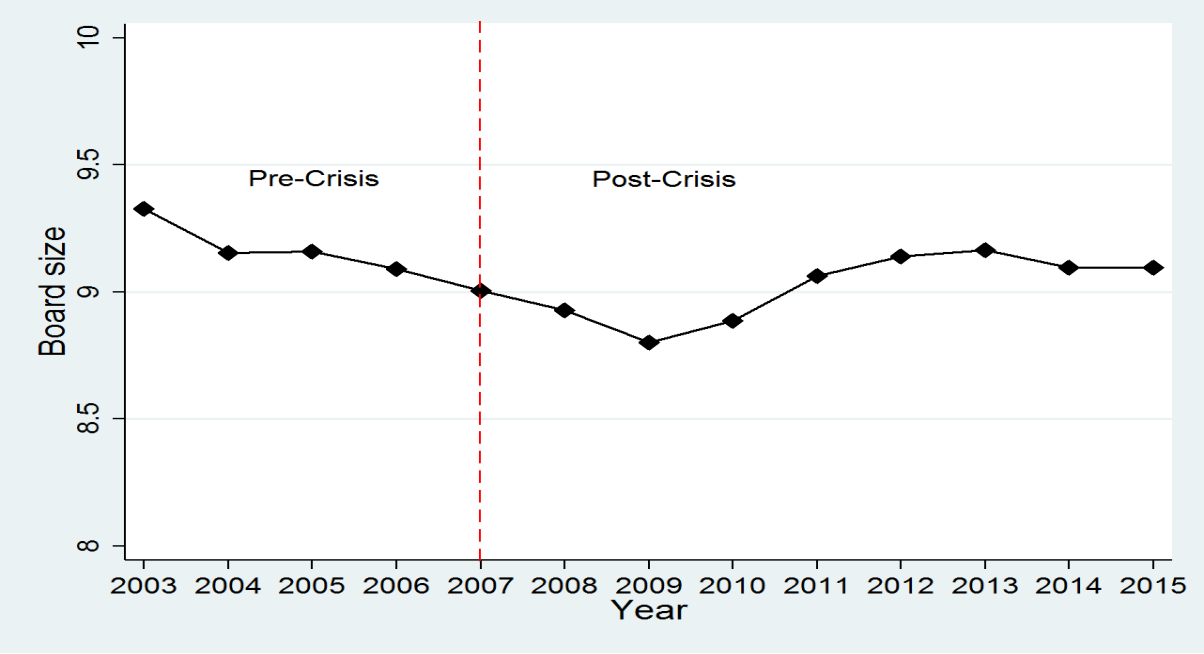


Figure 6.2 Board Size by Industry for FTSE 350 Non-Financial Firms

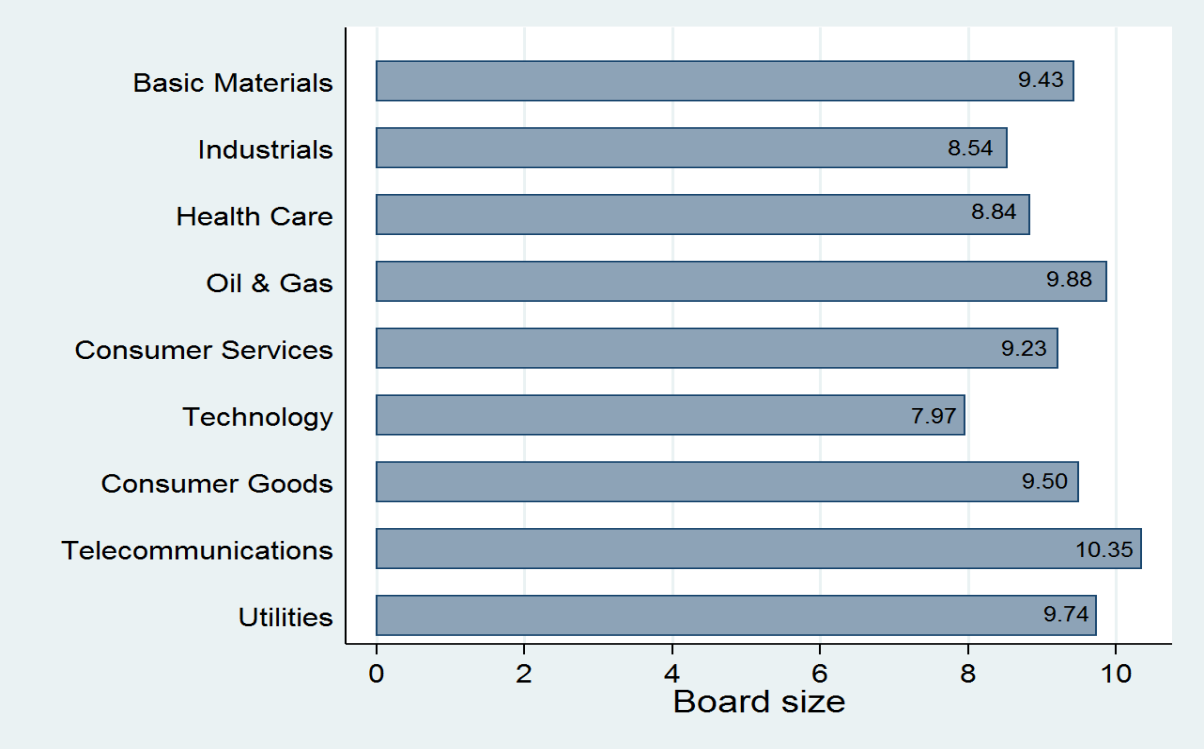


Figure 6.3 Board Size for FTSE 100 and FTSE 250 Non-Financial Firms

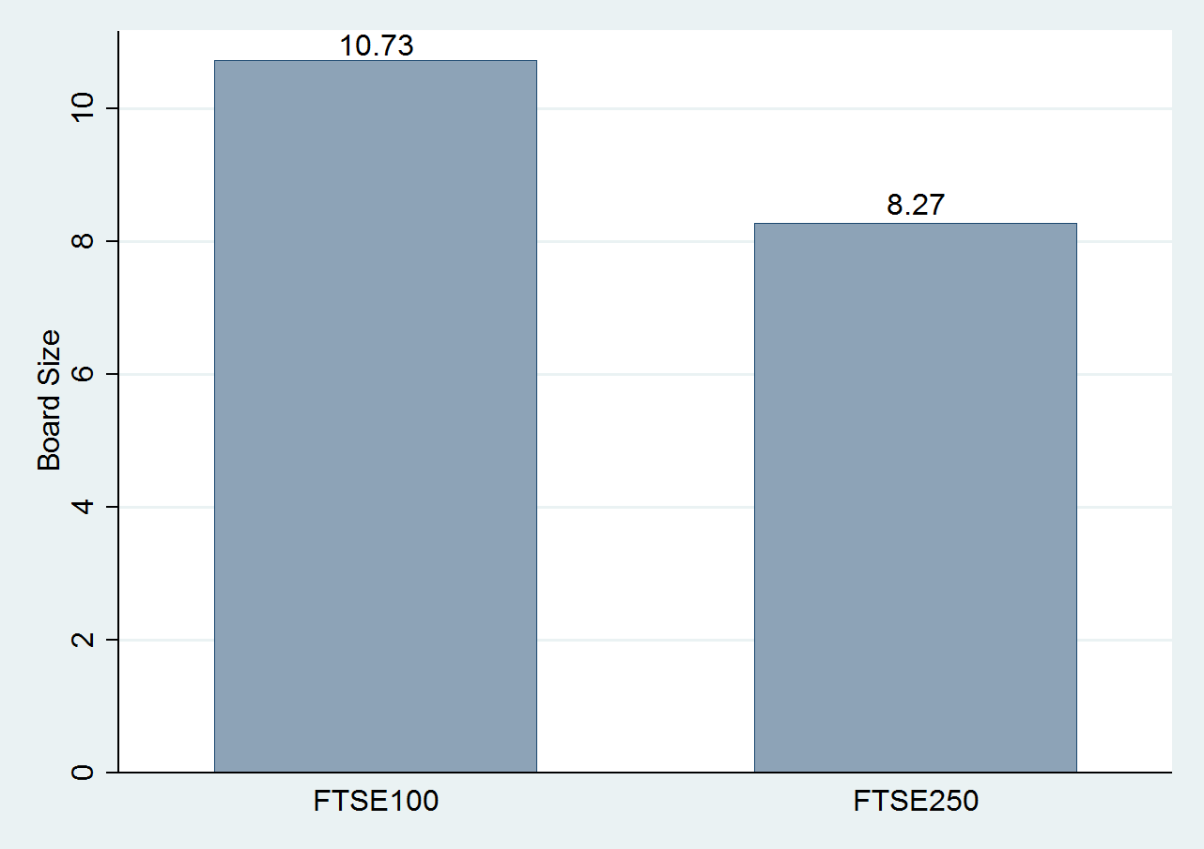


Figure 6.1 presents the evolution of board size from 2003 to 2015. The board size was slightly higher before the financial crisis of 2007 and decreased below nine until 2010. This might explain that higher board size is not preferable during a financial crisis (e.g. Essen et al., 2013). However, board size starts to recover and stabilise thereafter.

Figure 6.2 describes board size by industry. Telecommunications, oil and gas and utilities industries have the highest board size (10.35, 9.88 and 9.74, respectively); the technology industry has the lowest board size, at 7.97 board members. Figure 6.3 compares board size between FTSE 100 firms and FTSE 250 firms. It is clear that FTSE 100 firms have larger board size than FTSE 250 companies.

6.2.2 Board independence

Table 6.1 and Figure 6.4 compare the percentages of executive directors, non-executive non-independent directors and non-executive independent directors for FTSE 350 firms from 2003 to 2015. The proportion of executive directors decreased from 42% in 2003 to 28.6% by 2015. However, the percentage of non-executive non-independent directors gradually increased throughout the study period (from 48.2% in 2003 to 61.6% by 2015). This may indicate the UK boards have become more independent and that firms are complying with the UK Corporate Governance Codes more than ever. The UK Corporate Governance Codes (2010, 2012, 2014 and 2016) state that 'Except for smaller companies, at least half the board, excluding the chairman, should comprise non-executive directors determined by the board to be independent. A smaller company should have at least two independent non-executive directors'.

Figure 6.5 shows the percentages of executive directors, non-executive non-independent directors and non-executive independent directors among different industries. All industries have similar proportions of executive directors, non-executive non-independent directors and non-executive independent directors. This may also indicate that all industries tend to comply with the UK Corporate Governance Codes.

Figure 6.6 compares proportions of executive directors, non-executive non-independent directors and non-executive independent directors for FTSE 100 firms and FTSE 250 firms. FTSE 100 firms tend to have higher proportion of non-executive independent directors and lower proportion of executive directors than FTSE 250 firms. Nonetheless, both FTSE 100 and FTSE 250 firms have at least 50% of their board of directors defined as independent non-executive directors.

Figure 6.4 Board Independence for FTSE 350 Non-Financial Firms (2003-2015)

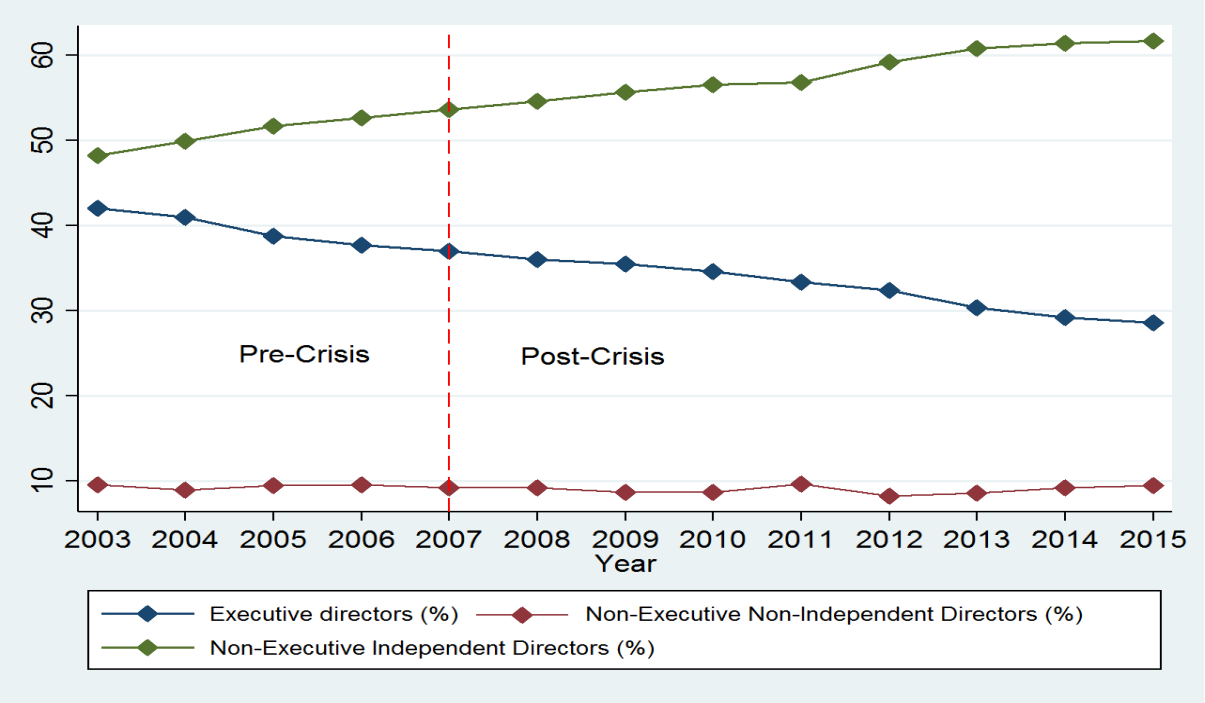


Figure 6.5 Board Independence by Industry for FTSE 350 Non-Financial Firms

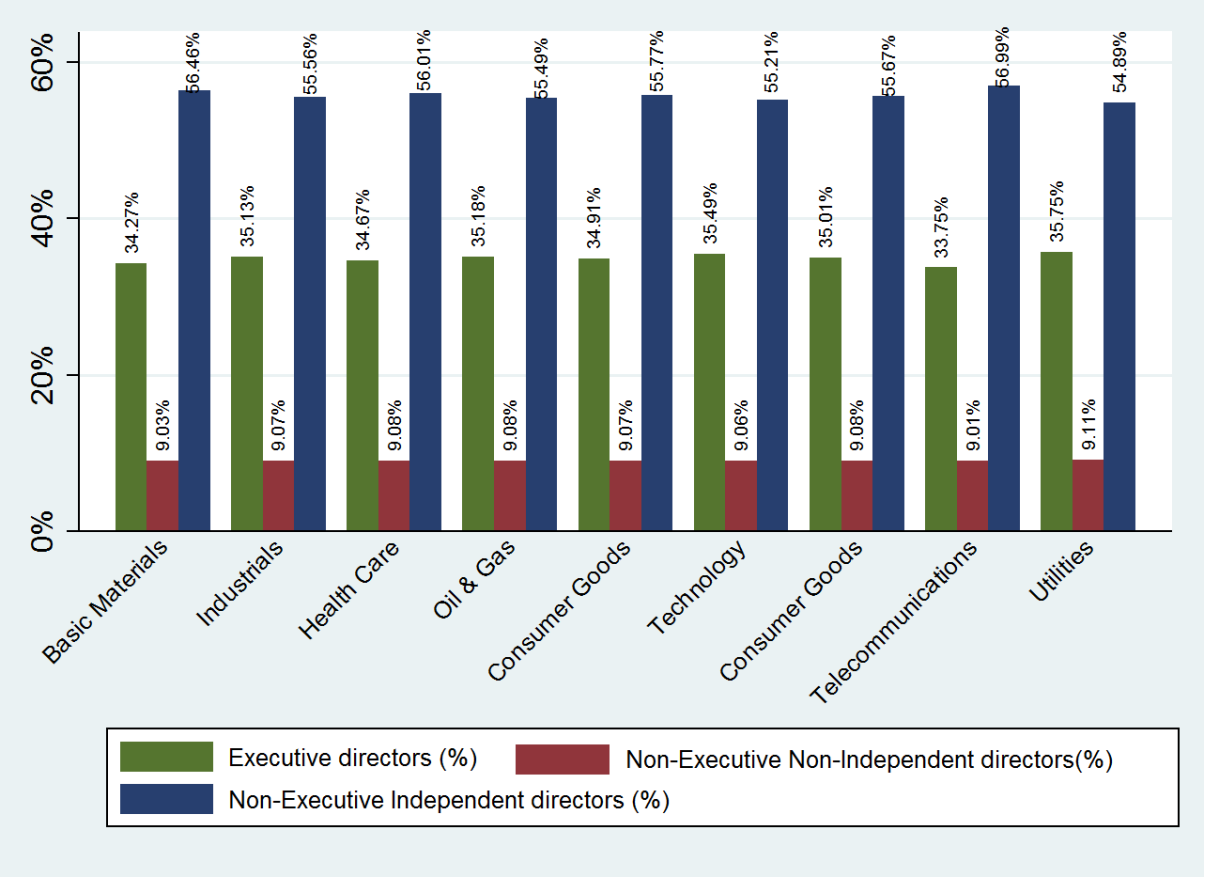
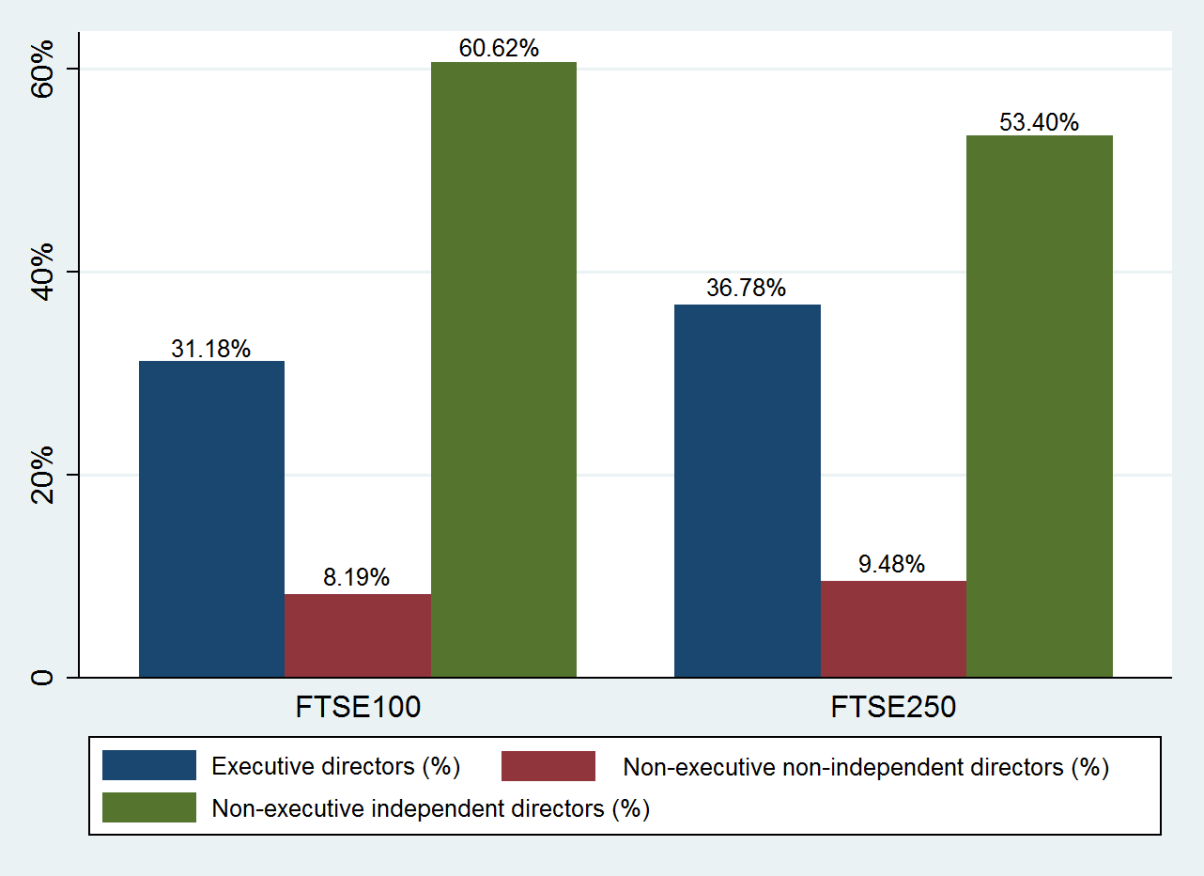


Figure 6.6 Board Independence for FTSE 100 and FTSE 250 Non-Financial Firms



6.2.3 CEO duality

The UK Corporate Governance Codes (2010, 2012, 2014 and 2016) describe that 'The roles of chairman and chief executive should not be exercised by the same individual. The division of responsibilities between the chairman and chief executive should be clearly established, set out in writing and agreed by the board'.

Table 6.1 and Figure 6.7 report CEO duality from 2003 to 2015 for FTSE 350 non-financial firms. There has been a dramatic decrease in the percentage of CEO duality. For example, the average CEO duality stood at 21.3% in 2003, whereas in 2015, CEO duality was only 7.08%. This is a clear indication that UK firms are complying with the code provision that states the roles of chairman and CEO should be separated.

Figure 6.8 presents CEO duality for different industries. Throughout the study period, the utilities industry had the lowest proportion of CEO duality (0.88%), followed by the health care industry (5.40%). In contrast, telecommunications, oil and gas and the basic materials industries had the highest percentage of CEO duality (38.6%, 26.23% and 24.59%, respectively). Figure 6.9 shows CEO duality for FTSE 100 and FTSE 250 firms over the period of 2003-2015. FTSE 250 companies tend to have higher proportion of CEO duality (about 14%) than FTSE 100 companies (only 10.86%).

Figure 6.7 CEO Duality for FTSE 350 Non-Financial Firms (2003-2015)

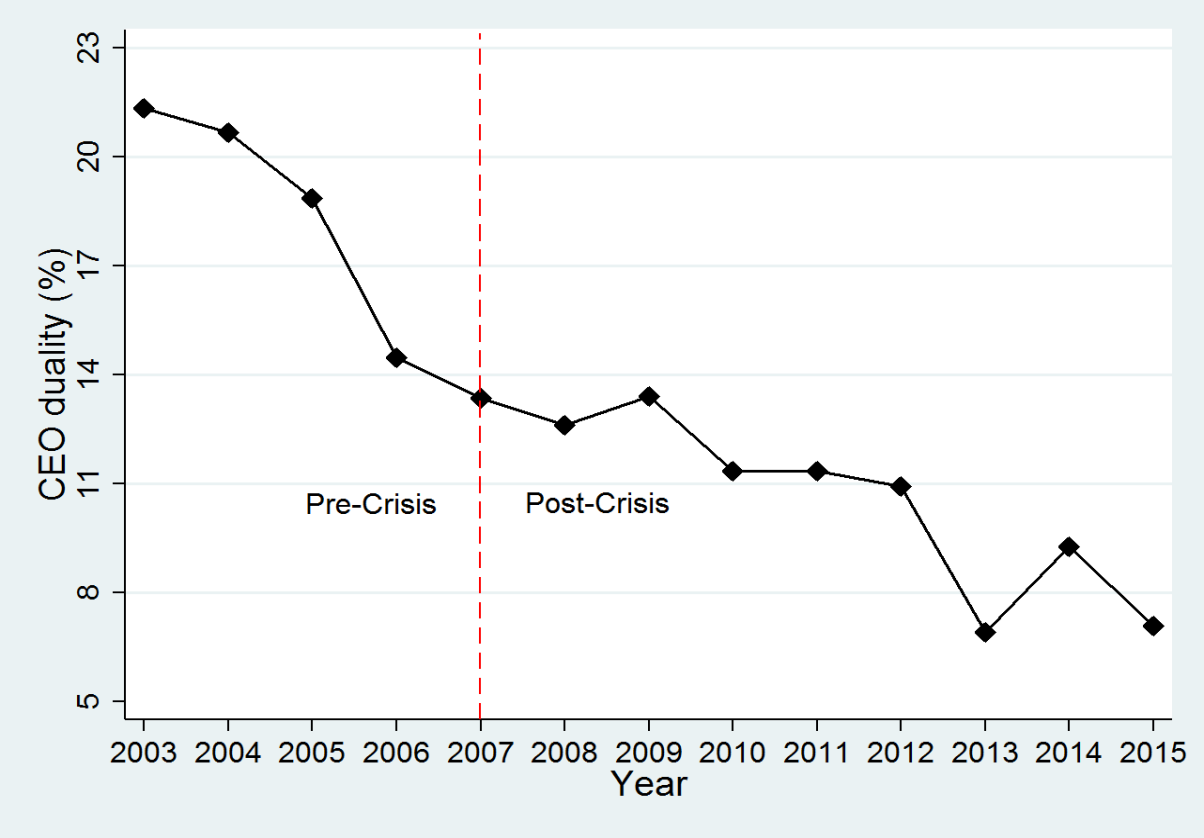


Figure 6.8 CEO Duality by Industry for FTSE 350 Non-Financial Firms

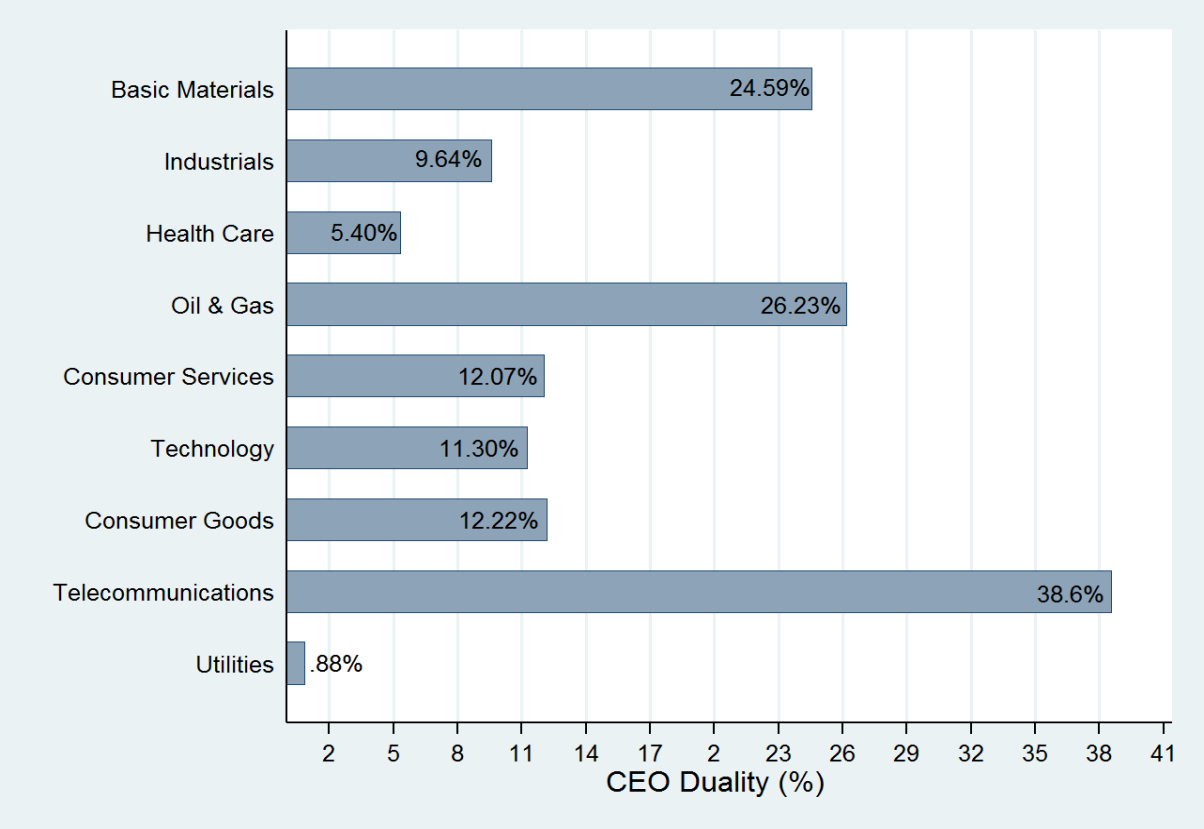
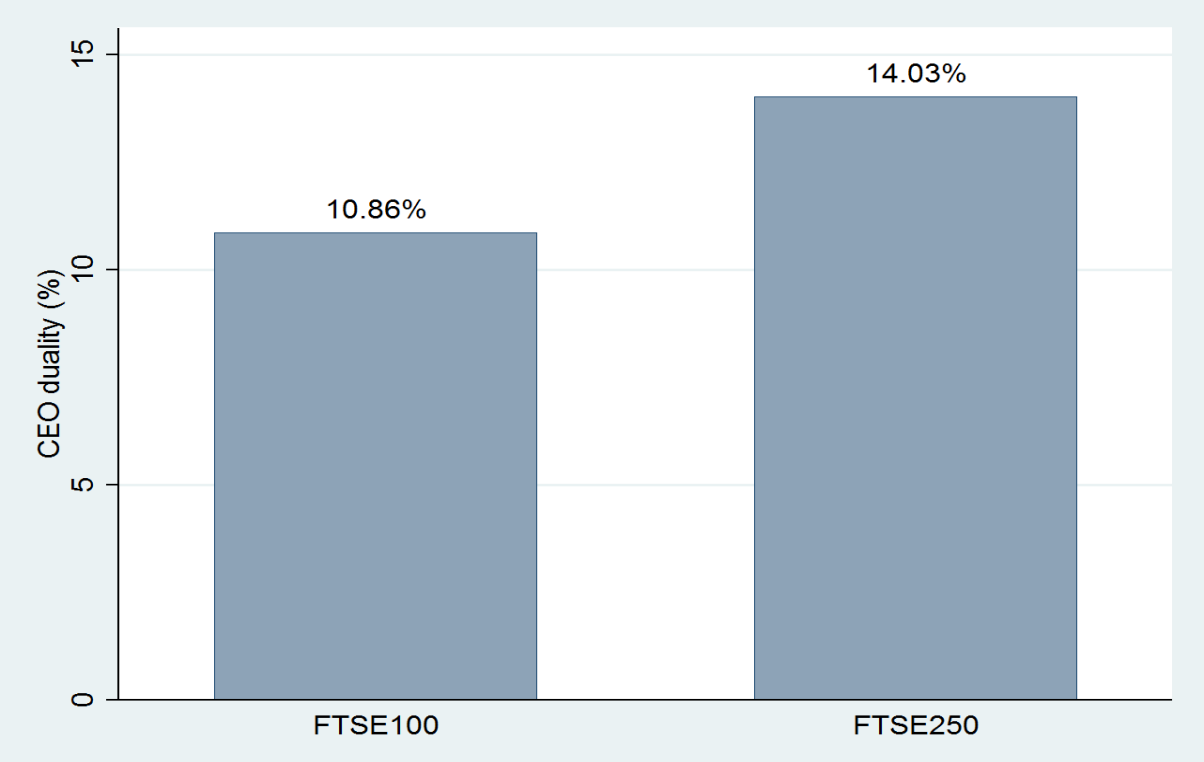


Figure 6.9 CEO Duality for FTSE 100 and FTSE 250 Non-Financial Firms



6.2.4 Institutional ownership

Table 6.1 and Figure 6.10 show the proportion of institutional ownership that holds 3% or more of company shares for the FTSE 350 non-financial firms from 2003 to 2015. The period between 2003 to 2011 witnessed a small climb in the percentage of institutional ownership (from almost 32% in 2003 to about 38% in 2011). However, after 2011, the number of institutional investors slightly dropped to 33% by 2015. This may suggest the UK quoted companies have become more widely held.

Figure 6.11 shows the compression of institutional ownership in different industries. The oil and gas and telecommunications industries have the highest percentages of institutional ownership (46.39% and 40.12%, respectively), whereas the industrials and utilities industries have the lowest proportions of institutional ownership (25.5% and 26.75%, respectively). Figure 6.12 reports that FTSE 250 companies have higher percentage of institutional ownership than FTSE 100 companies.

Figure 6.10 Institutional Ownership for FTSE 350 Non-Financial Firms (2003-2015)

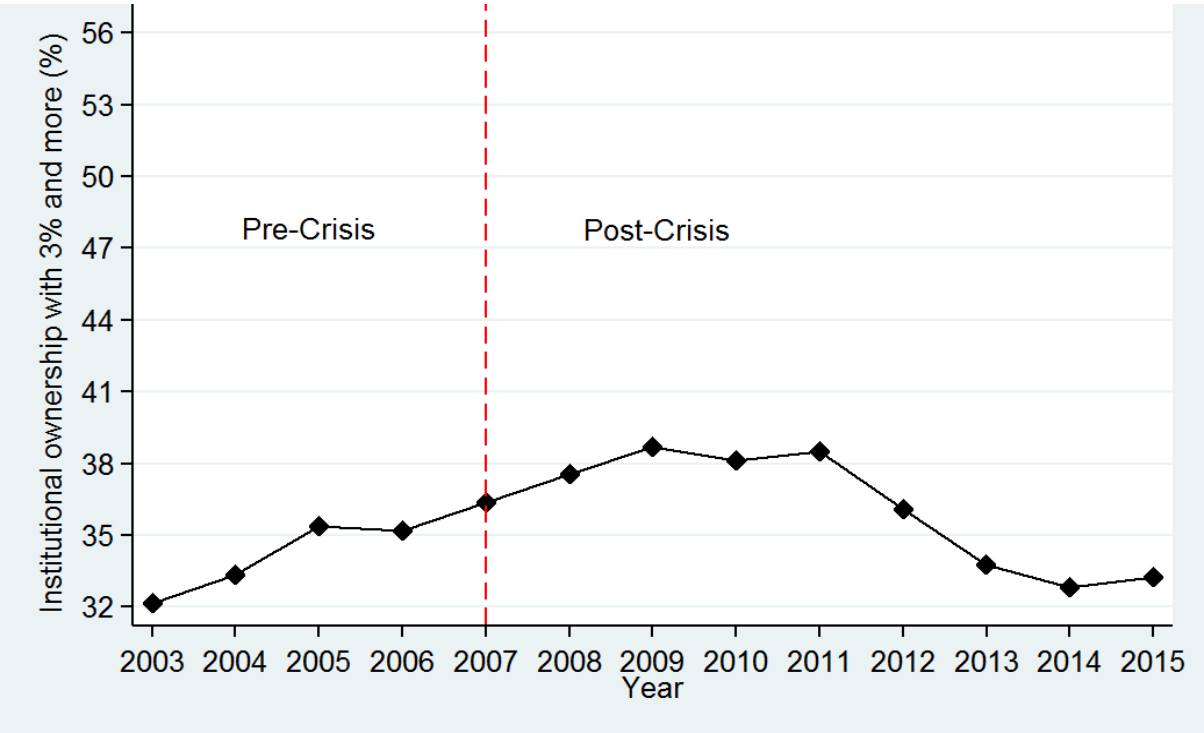


Figure 6.11 Institutional Ownership by Industry for FTSE 350 Non-Financial Firms

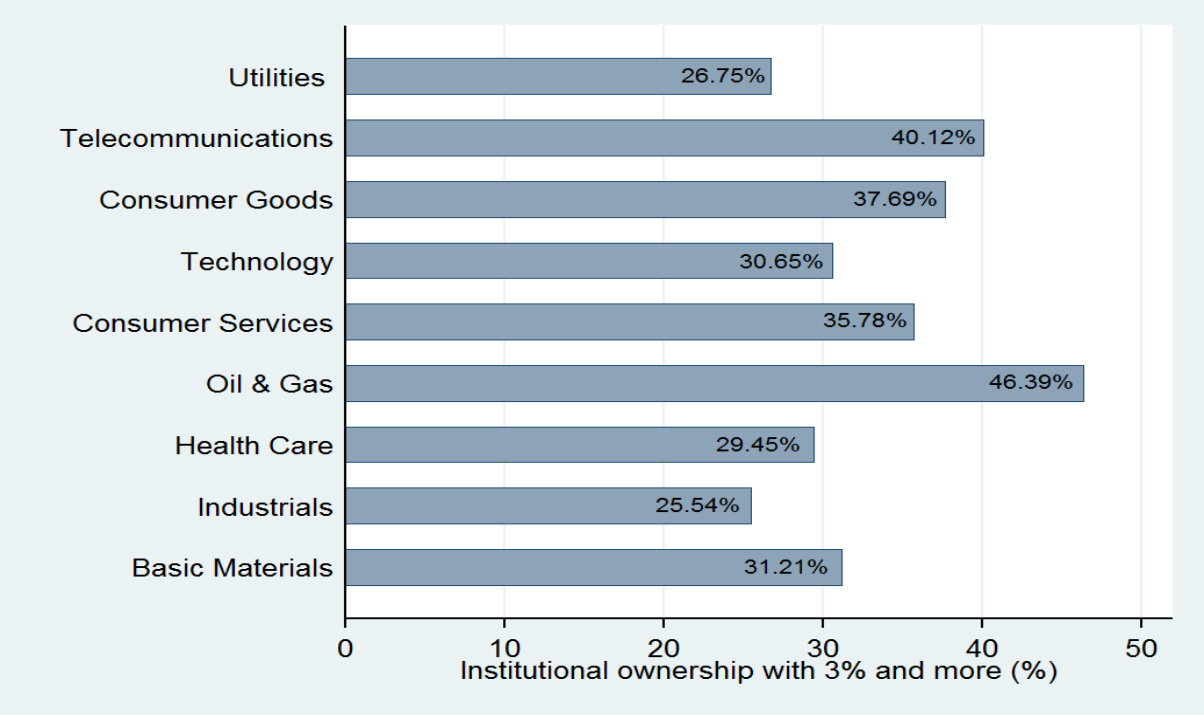
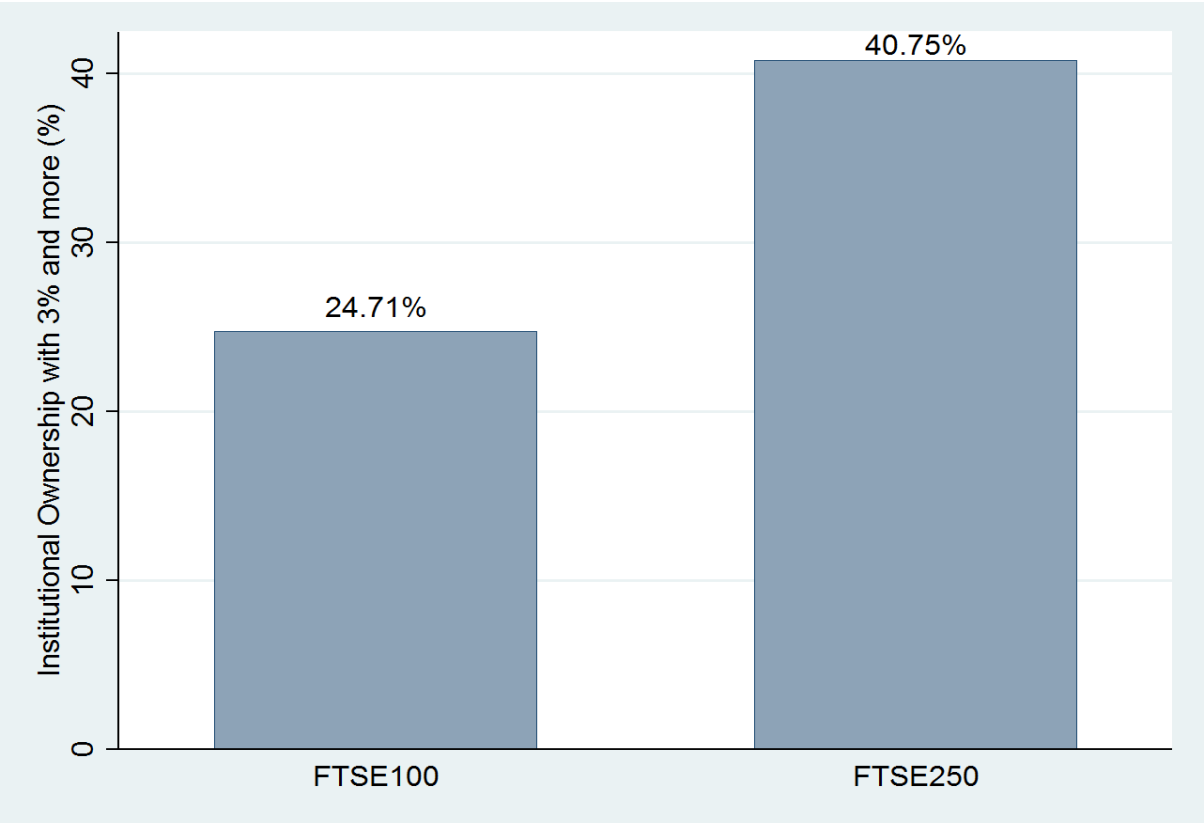


Figure 6.12 Institutional Ownership for FTSE 100 and FTSE 250 Non-Financial Firms



6.2.5 Women directors on boards

Another important element of the UK boards' reforms was how to increase the number of women in FTSE 350 firms. The Davies Report (2011) recommended a target of 25% representation of women on the FTSE 100 boards by 2015. The subsequent Davies Reports (2011, 2012, 2013, 2014 and 2015) reviewed the 25% implementation of women by 2015. The UK Corporate Governance Codes (2012, 2014 and 2016) have stressed the importance of gender diversity during the appointment of new board of directors: 'the search for board candidates should be conducted, and appointments made, on merit, against objective criteria and with due regard for the benefits of diversity on the board, including gender'.

Table 6.1 and Figure 6.13 present the average percentage of women in FTSE 350 non-financial firms from 2003 to 2015. Women representation on UK corporate boards was below 8% before the 2007 financial crisis. For example, the average percentage of women directors in 2003 was only 5.2%. However, after the financial crisis and after the publication of the Davies Reports (2011), the proportion of women directors witnessed a sharp increase, from 7.77% in 2007 to 20.8% by 2015.

Figure 6.14 shows women representation by industry. Women directors are more concentrated in the telecommunications and basic materials industries (11.69% and 11.13%, respectively). In contrast, the technology and utilities industries have the lowest representation of women directors (9.60% and 9.64%, respectively). Figure 6.15 presents women representation by FTSE index category (FTSE 100 and FTSE 250). FTSE 100 firms has the highest percentage of women directors (13.93%) than FTSE 250 firms (8.72%).

Figure 6.13 Women (%) for FTSE 350 Non-Financial Firms (2003-2015)

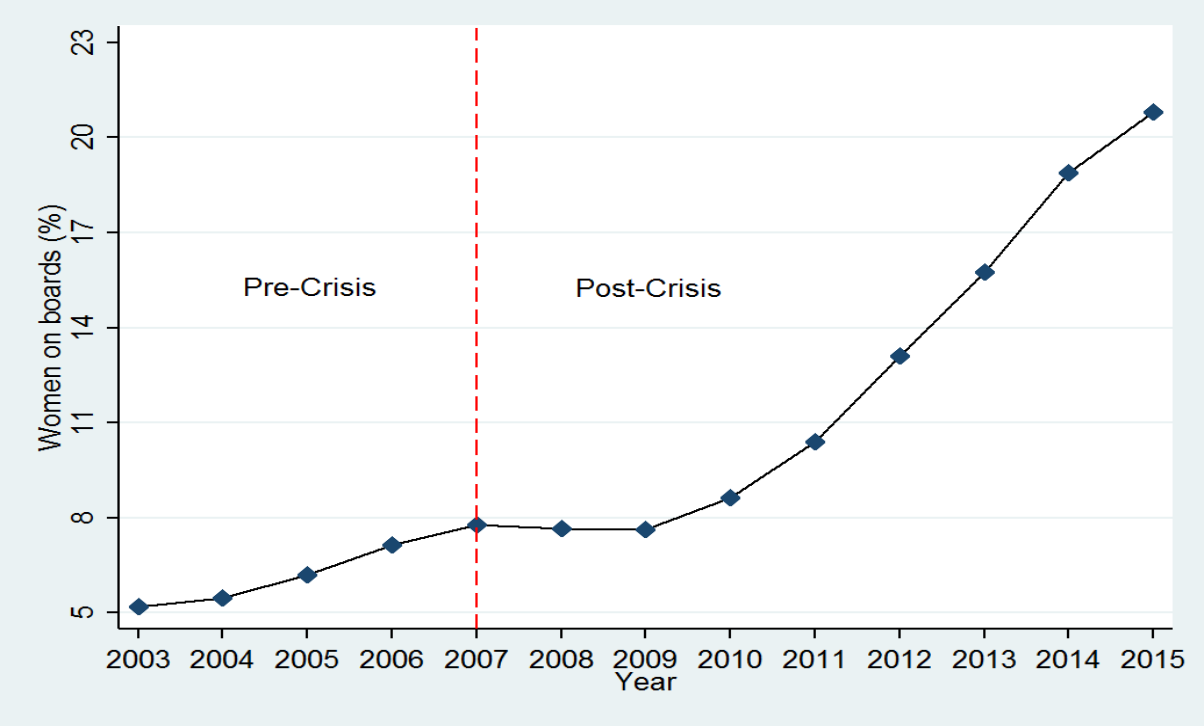


Figure 6.14 Women (%) by Industry for FTSE 350 Non-Financial Firms

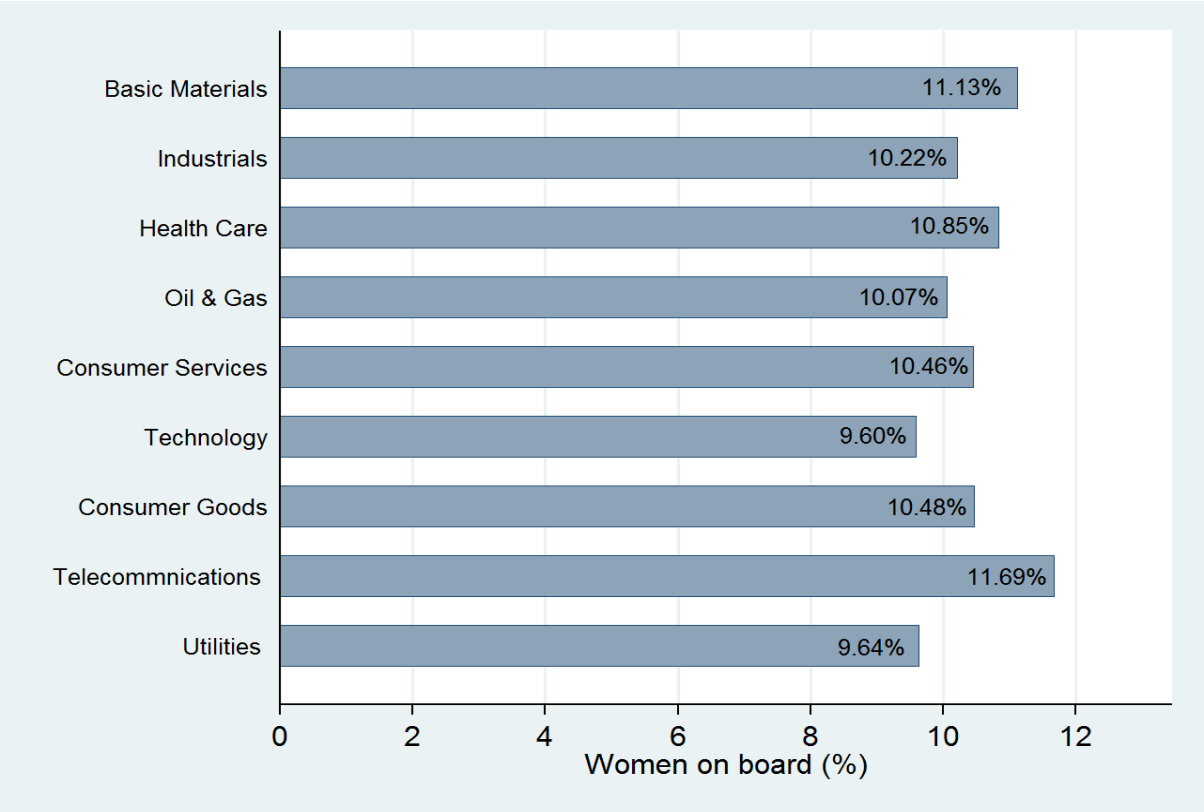
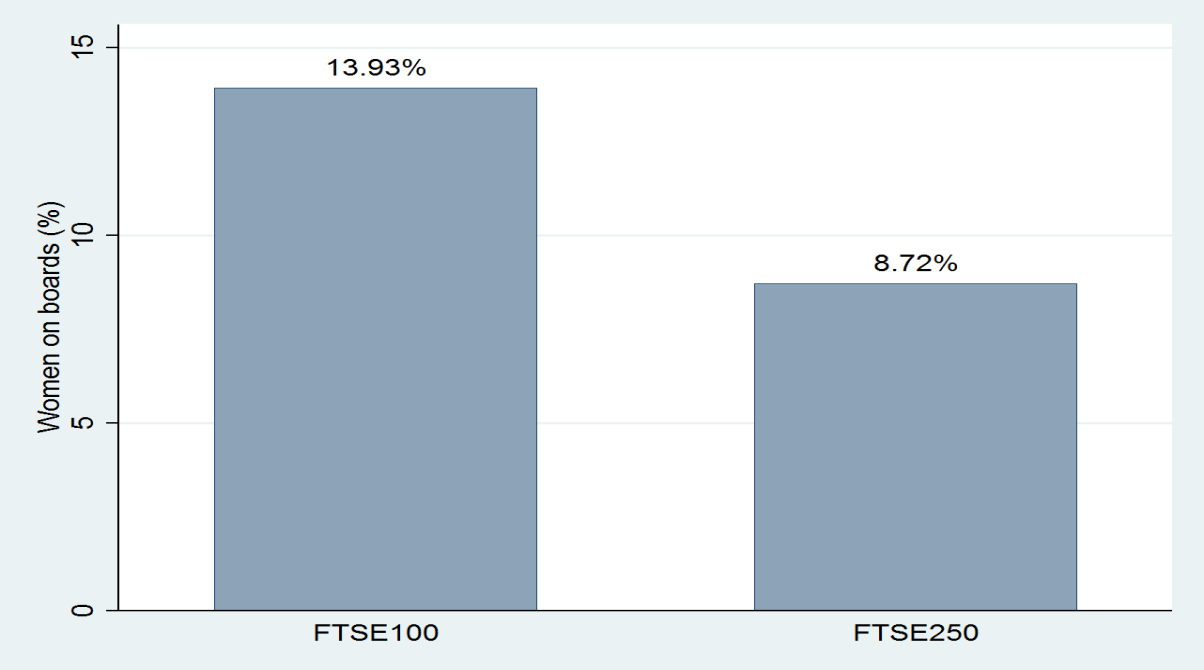


Figure 6.15 Women (%) for FTSE 100 and FTSE 250 Non-Financial Firms



6.2.6 Foreign directors on UK boards

The UK has one of the highest numbers of foreign directors in the world (Conyon et al., 2016). Table 6.1 and Figure 6.16 illustrate the average percentage of foreign directors throughout the study period (2003-2015) for FTSE 350 non-financial firms. The average proportion of foreign directors on UK boards was at 19.3% in 2003; however, foreign directors decreased to 17.9% in 2005. After 2005, the average percentage of foreign directors in the UK saw some recovery until 2009, when the number increased dramatically to 27.4% by 2015.

Figure 6.17 and 6.18 show the percentage of foreign directors in the UK's FTSE 350 non-financial firms by each industry and by FTSE category, respectively. All industries have somewhat similar percentages of foreign directors (ranking from 21.07% for the utilities industry to 22.57% for telecommunications industry). It is clear that FTSE 100 firms have higher proportion of foreign directors than FTSE 250 firms do.

Figure 6.16 Foreign Directors (%) for FTSE 350 Non-Financial Firms (2003-2015)

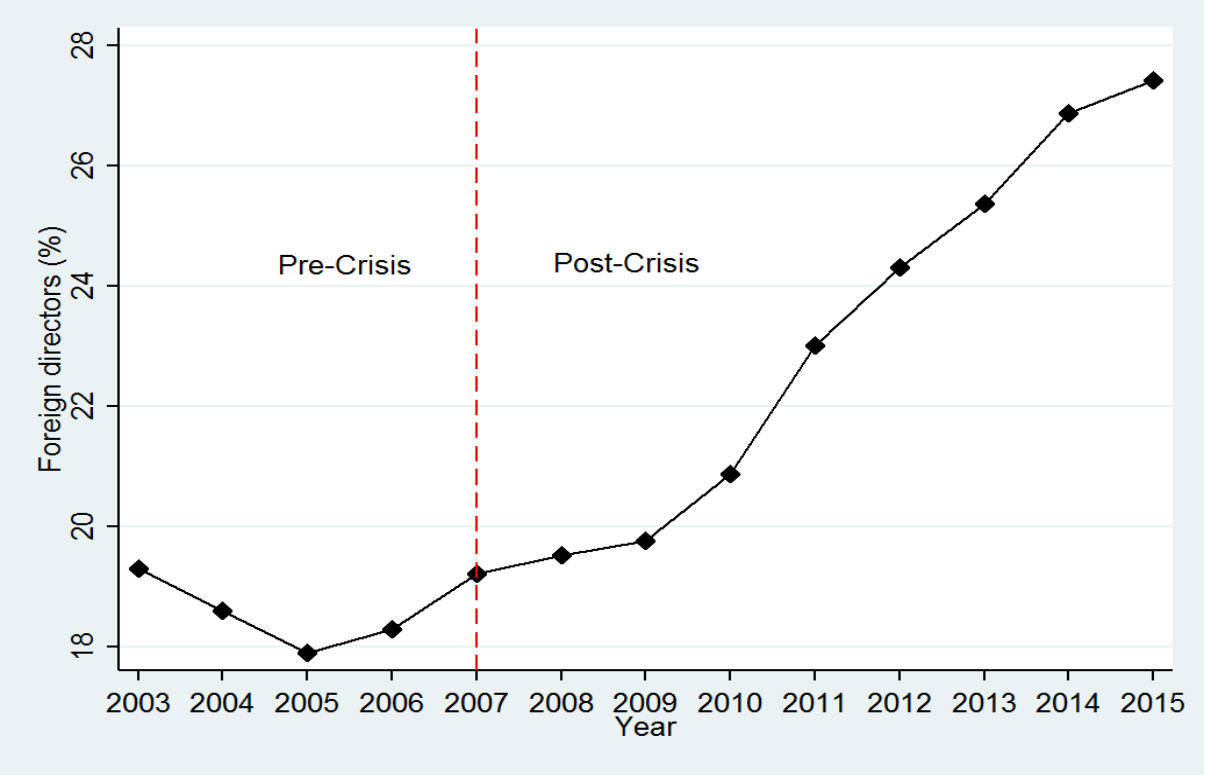


Figure 6.17 Foreign Directors (%) by Industry for FTSE 350 Non-Financial Firms

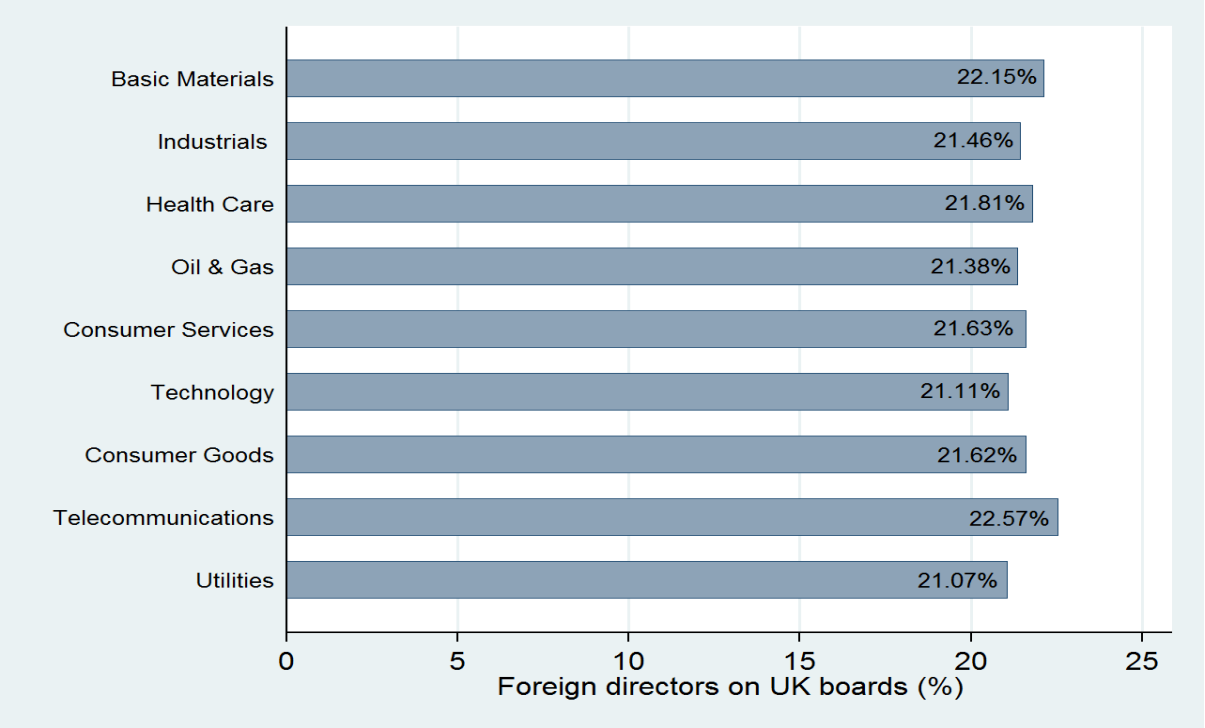
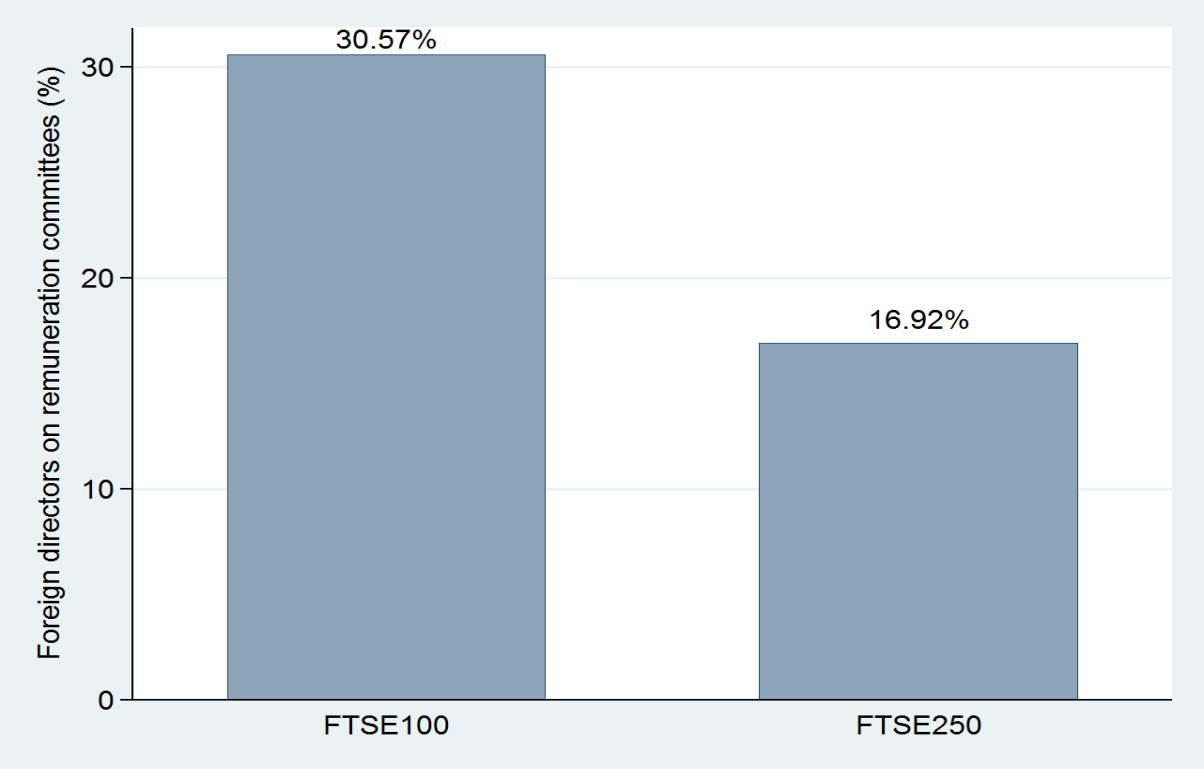


Figure 6.18 Foreign Directors (%) for FTSE 100 and FTSE 250 Non-Financial Firms



6.3 Time Series and Industry Analysis of Remuneration Committee Characteristics

This section reports remuneration characteristics by year, by industry and by FTSE category for the UK's FTSE350 firms from 2003 to 2015. Table 6.2 shows the summary of the time series descriptive statistics of remuneration characteristics, including remuneration committee size, remuneration committee independence and percentages of women and foreign directors on remuneration committees.

6.3.1 Remuneration committee size

Table 6.2 and Figure 6.19 report the average percentage of remuneration committee size throughout the study period (2003-2015) for FTSE 350 non-financial firms. Figure 6.19 presents that the average remuneration committee size has slightly increased overtime, from 3.87 members in 2003 to about 4 members by 2015.

Table 6.2 Time Series Descriptive Statistics of Remuneration Committee Characteristics for FTSE 350 Non-Financial Firms from 2003 to 2015

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Remuneration Committee Size														
Mean	3.87	3.68	3.72	3.76	3.9	3.88	3.87	3.97	3.96	4.07	4.19	4.17	4.09	3.93
Median	4	4	3	4	4	4	4	4	4	4	4	4	4	4
SD	1.09	0.973	1.06	1.04	1.03	0.988	0.961	1.01	1	1.05	1.08	1.06	1.12	1.05
Min	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Max	9	8	8	8	8	8	7	8	8	8	8	8	8	9
N	178	207	228	235	232	238	239	238	238	229	231	226	211	2930
Remuneration Committee Independence %														
Mean	93.1	94.9	95.7	95.3	93.7	93.7	93.9	94	93	95.5	95	93.9	95.1	94.4
Median	100	100	100	100	100	100	100	100	100	100	100	100	100	100
SD	0.149	0.136	0.119	0.123	0.131	0.129	0.131	0.134	0.147	0.115	0.122	0.136	0.124	0.131
Min	25	25	33.3	33.3	33.3	33.3	25	25	25	33.3	33.3	25	33.3	25
Max	100	100	100	100	100	100	100	100	100	100	100	100	100	100
N	177	208	228	234	231	237	238	237	236	228	232	227	212	2925
Women on Remuneration Committee %														
Mean	7.97	8	9.22	11.2	11.6	11.2	11.2	12.3	13.5	18.3	22.6	26.2	29.8	14.9
Median	0	0	0	0	0	0	0	0	0	20	25	25	33.3	0
SD	13.8	14.6	15.1	15.8	16.3	15.9	15.3	15.5	15.7	17.1	17	17.5	17.5	17.3
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	66.7	75	75	75
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
Foreign director on Remuneration Committee %														
Mean	20.2	18.3	18.6	17.2	18.7	19.1	19.2	20.2	23.4	24.2	24.8	26.1	27	21.3
Median	8.33	0	0	0	0	0	0	0	20	20	20	20	25	16.7
SD	24.8	24.8	24.9	24	25.1	26	25.2	25.3	26.6	26.4	26.5	28	28.4	26
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	100	100	100	100	100	100	100	100	100	100	100	100	100	100
N	178	207	228	235	232	238	239	238	238	229	231	226	211	2930

Note that remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in the remuneration committee. Women on remuneration committee is proportion of women directors from total remuneration committee size. Foreign directors on remuneration committee is proportion of foreign directors from total remuneration committee size.

Figure 6.20 shows the variation of remuneration committee size among different industries. The consumer goods industry has the highest remuneration committee size (4.32 members), whereas the basic materials industry has the lowest remuneration committee size (3.74 members). FTSE 100 firms tend to have higher remuneration committee size than FTSE 250 firms do (see Figure 6.21).

Figure 6.19 Remuneration Committee Size for FTSE 350 Non-Financial Firms (2003-2015)

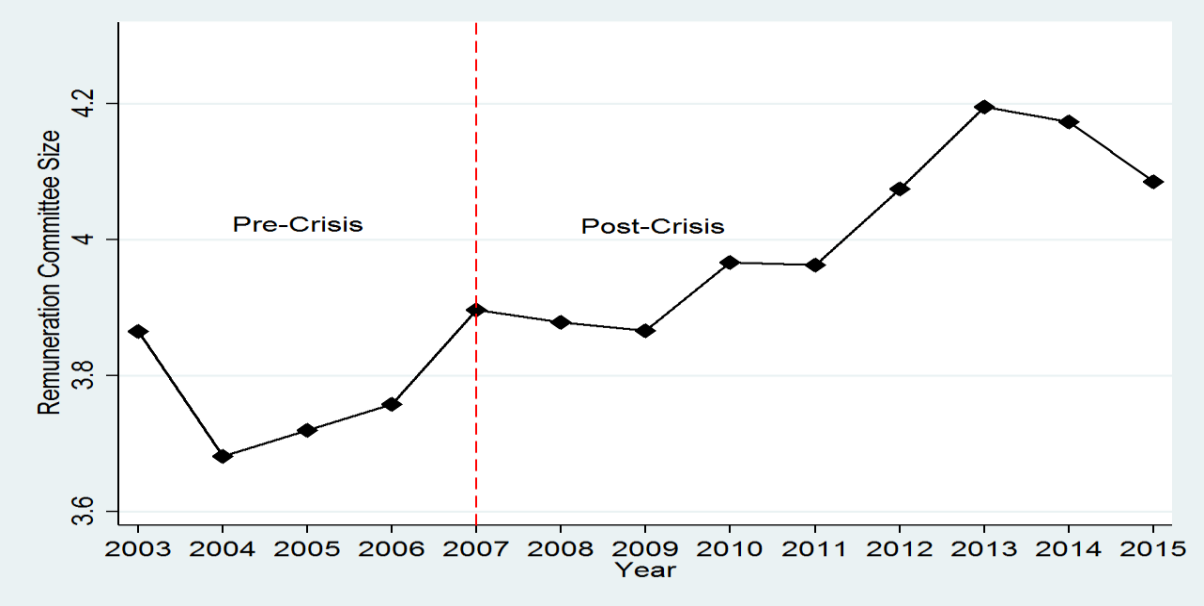


Figure 6.20 Remuneration Committee Size by Industry for FTSE 350 Non-Financial Firms

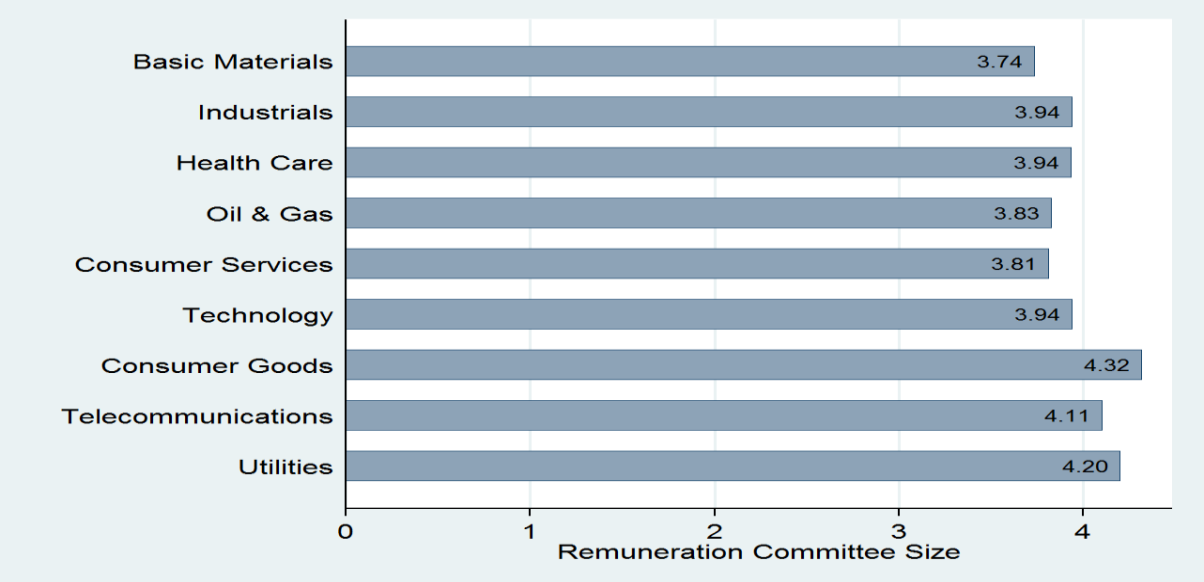
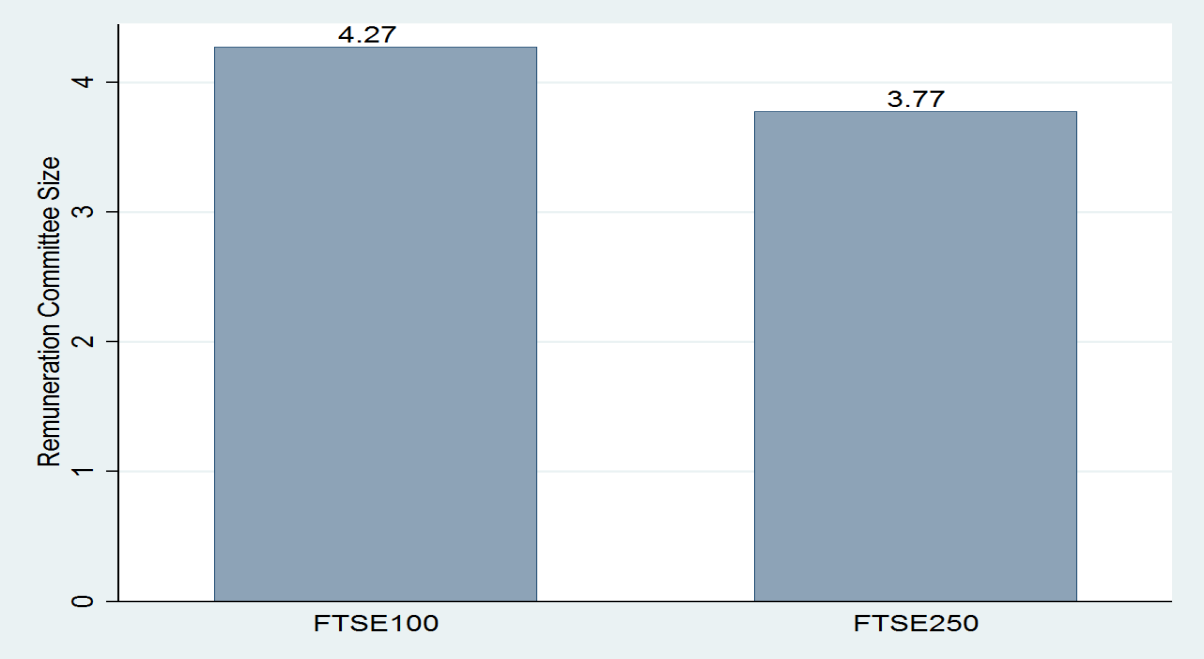


Figure 6.21 Remuneration Committee Size for FTSE 100 and FTSE 250 Non-Financial Firms



6.3.2 Remuneration committee independence

Table 6.2 and Figure 6.22 compare the percentages of non-executive non-independent directors and non-executive independent directors for FTSE 350 firms' remuneration committees from 2003 to 2015. The percentage of non-executive independent directors on remuneration committees was somewhat stable over the study period (94.4% on average). Whereas, the percentage of non-executive non-independent directors on remuneration committees remained below 30% throughout the study period.

Figure 6.23 shows the percentages of non-executive non-independent directors and non-executive independent directors among different industries. The telecommunication industry has the highest proportion of remuneration committee independence (about 99%), whereas the health care industry has the lowest proportion of remuneration committee independence (about 92%).

Figure 6.24 compares the proportion of non-executive non-independent directors and non-executive independent directors for FTSE 100 firms and FTSE 250 firms. FTSE 100 and FTSE 250 firms' remuneration committees tend to have similar proportion of non-executive non-independent directors non-executive independent directors.

Figure 6.22 Remuneration Committee Independence for FTSE 350 Non-Financial Firms (2003-2015)

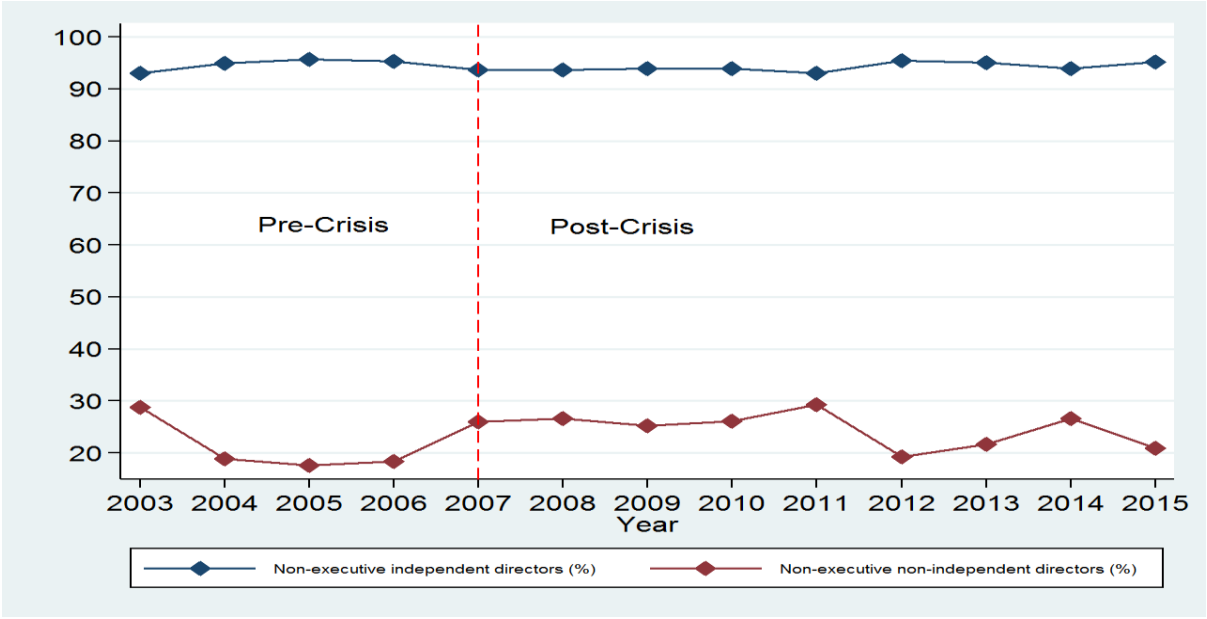


Figure 6.23 Remuneration Committee Independence by Industry for FTSE 350 Non-Financial Firms

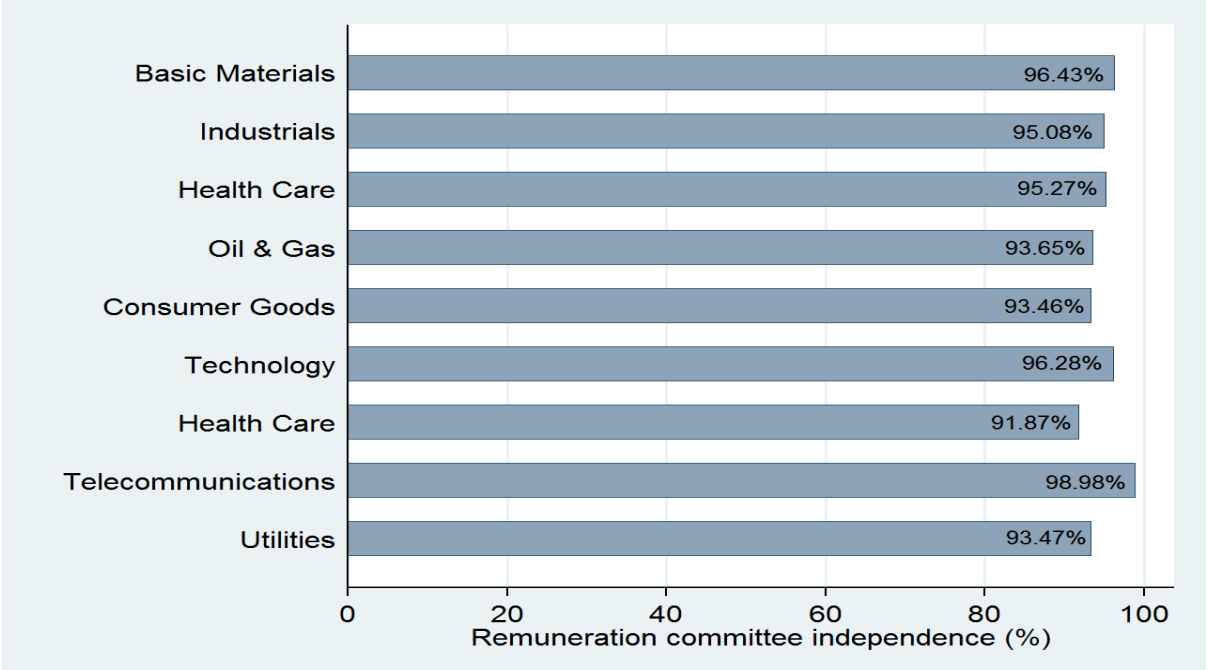
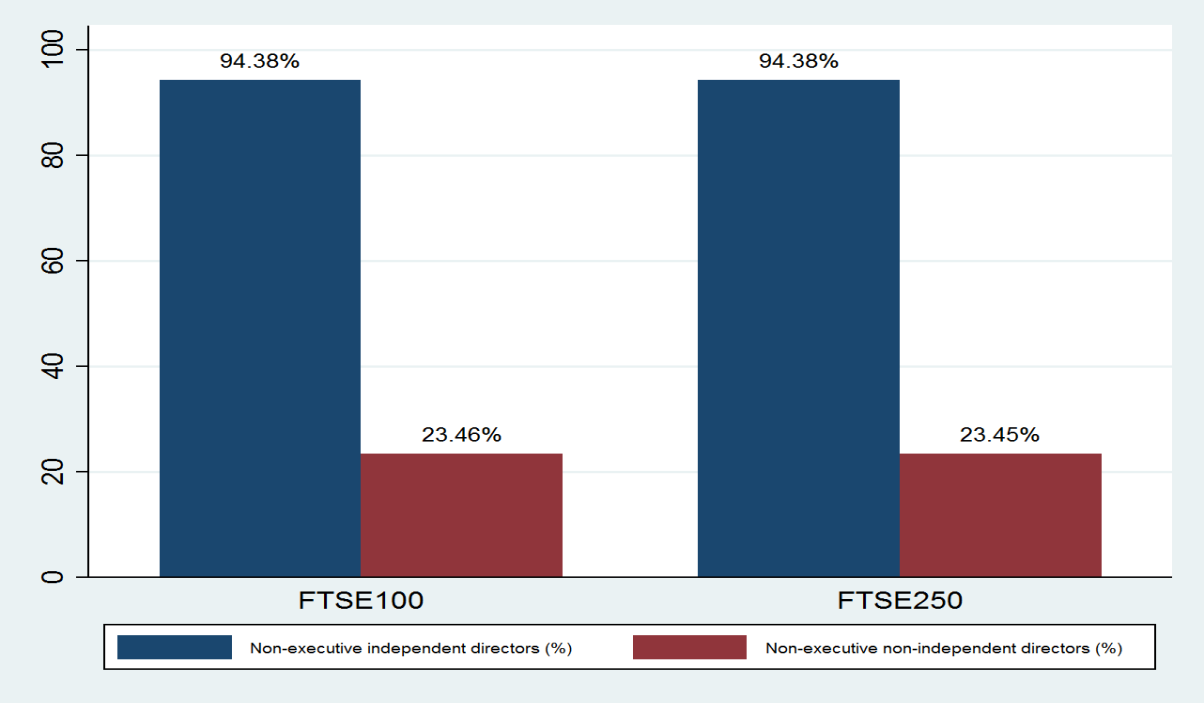


Figure 6.24 Remuneration Committee Independence for FTSE 100 and FTSE 250 Non-Financial Firms



6.3.3 Women on remuneration committees

Table 6.2 and Figure 6.25 present the average proportion of women in FTSE 350 non-financial firms' remuneration committees from 2003 to 2015. Women representation on remuneration committees was below 15% pre the 2007 financial crisis. For instance, the average proportion of women directors on remuneration committees in 2003 was only 7.97%. However, post the publication of the Davies Reports (2011), the proportion of women directors have seen a dramatic increase, from 11.6% in 2007 to 29.8% by 2015.

Figures 6.26 and 6.27 show women representation on remuneration committees by industry and FTSE index category. Women directors are more found in the utilities and consumer services industries (21.08% and 19.03%, respectively). In contrary, the basic materials and oil and gas industries have the lowest proportion of women directors (7.83% and 10.33%, respectively). FTSE 100 firms' remuneration committees tend to have higher percentage of women directors (18.32%) than FTSE 250 firms do (13.29%).

Figure 6.25 Women on Remuneration Committees for FTSE 350 Non-Financial Firms (2003-2015)

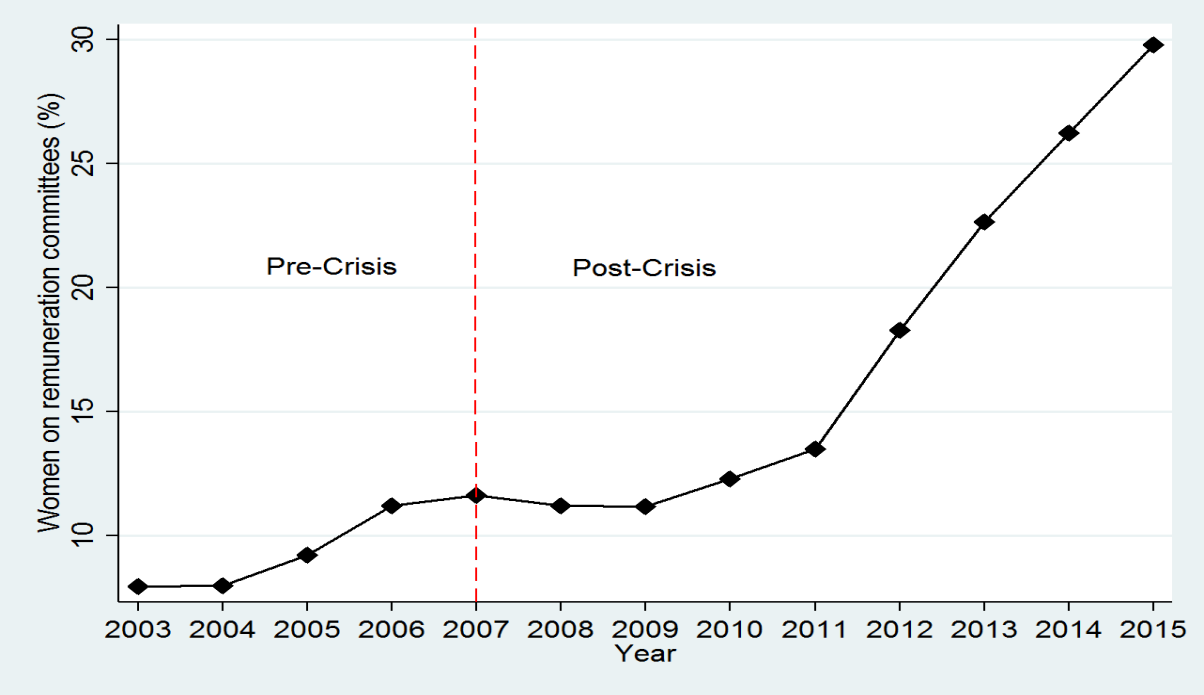


Figure 6.26 Women on Remuneration Committees by Industry for FTSE 350 Non-Financial Firms

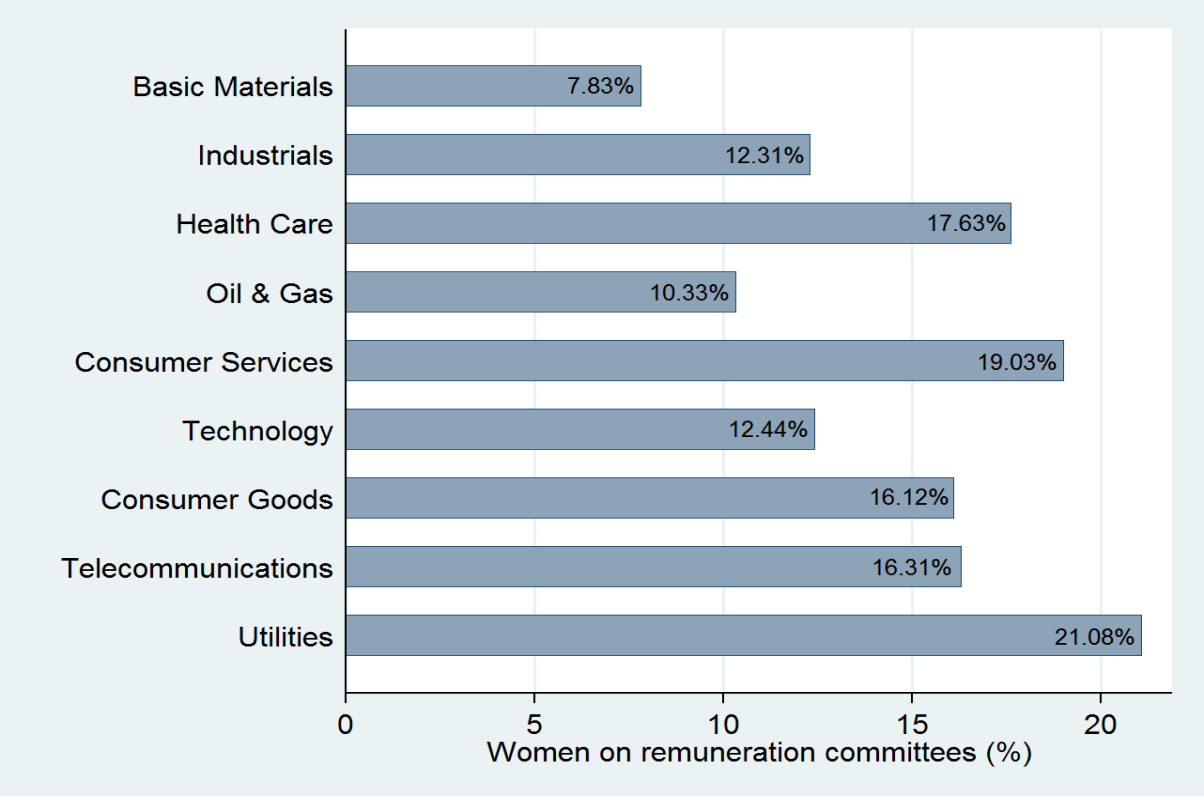
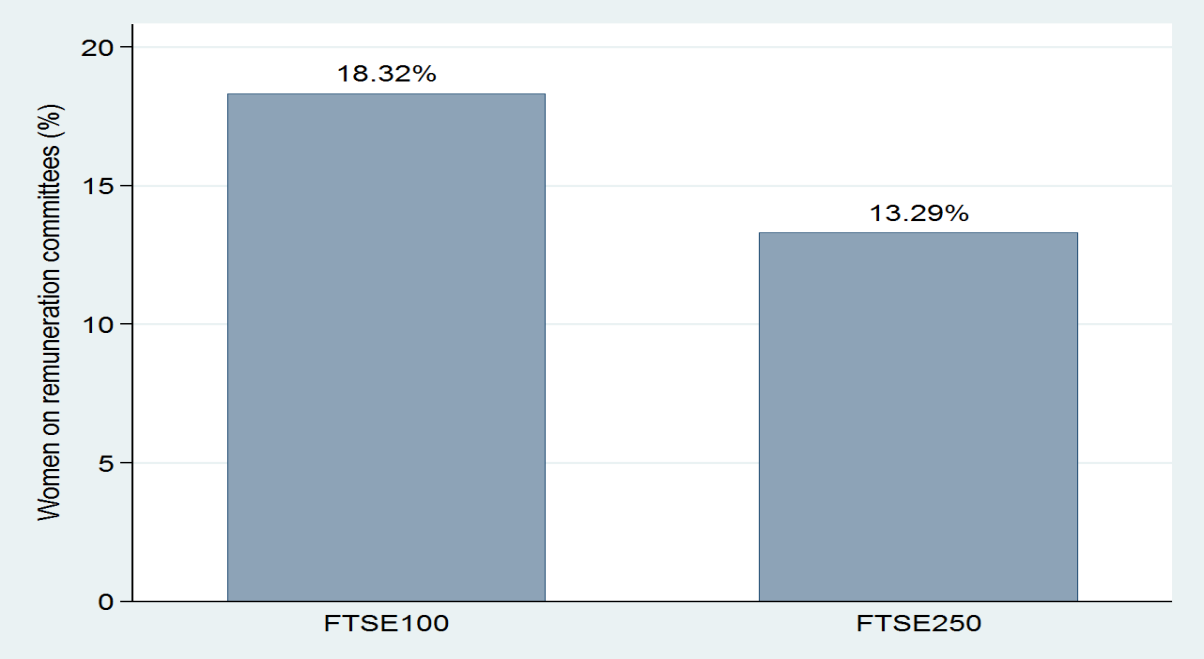


Figure 6.27 Women on Remuneration Committees for FTSE 100 and FTSE 250 Non-Financial Firms



6.3.4 Foreign directors on remuneration committees

Table 6.2 and Figure 6.28 show the average percentage of foreign directors on remuneration committees throughout the study period (2003-2015) for FTSE 350 non-financial firms. The average proportion of foreign directors on UK remuneration committees was at 20.2% in 2003; however, foreign directors on remuneration committees decreased to level below 18% in 2006. After 2006, the average proportion of foreign directors on remuneration committees witnessed some recovery until 2010, when the number increased sharply to about 27% by 2015.

Figures 6.29 and 6.30 show the proportion of foreign directors in the UK's FTSE 350 non-financial firms' remuneration committees by industry and by FTSE category. Remuneration committees of the basic materials industry has the highest proportion of foreign directors (about 45%) and remuneration committees of the utilities industry have the lowest proportion of foreign directors (10.74%). It is clear that FTSE 100 firms' remuneration committees have higher proportion of foreign directors than FTSE 250 firms' remuneration committees.

Figure 6.28 Foreign Directors on Remuneration Committees for FTSE 350 Non-Financial Firms (2003-2015)

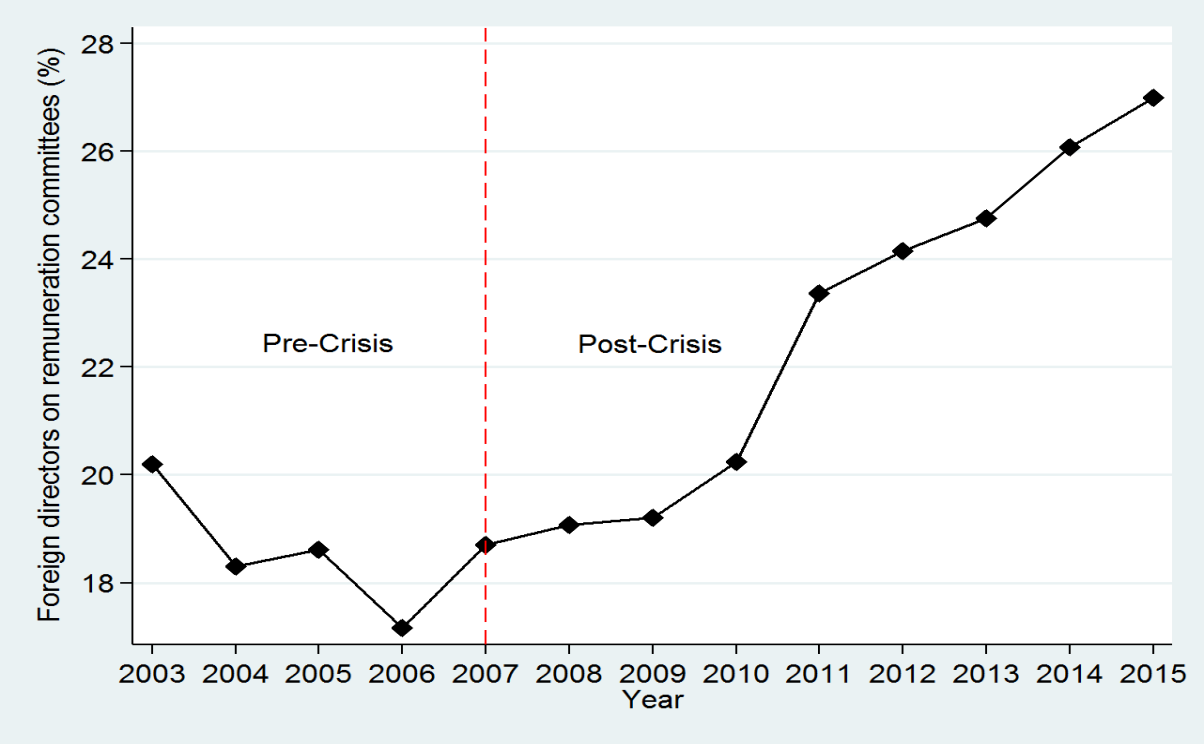


Figure 6.29 Foreign Directors on Remuneration Committees by Industry for FTSE 350 Non-Financial Firms

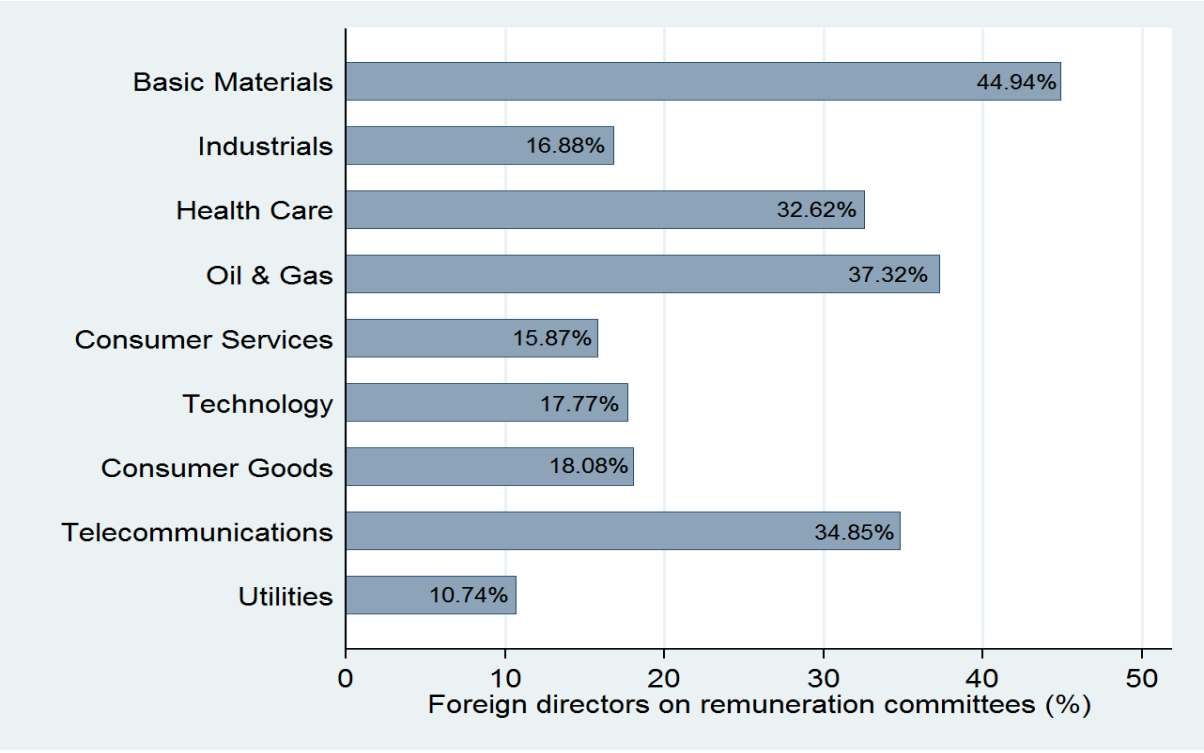
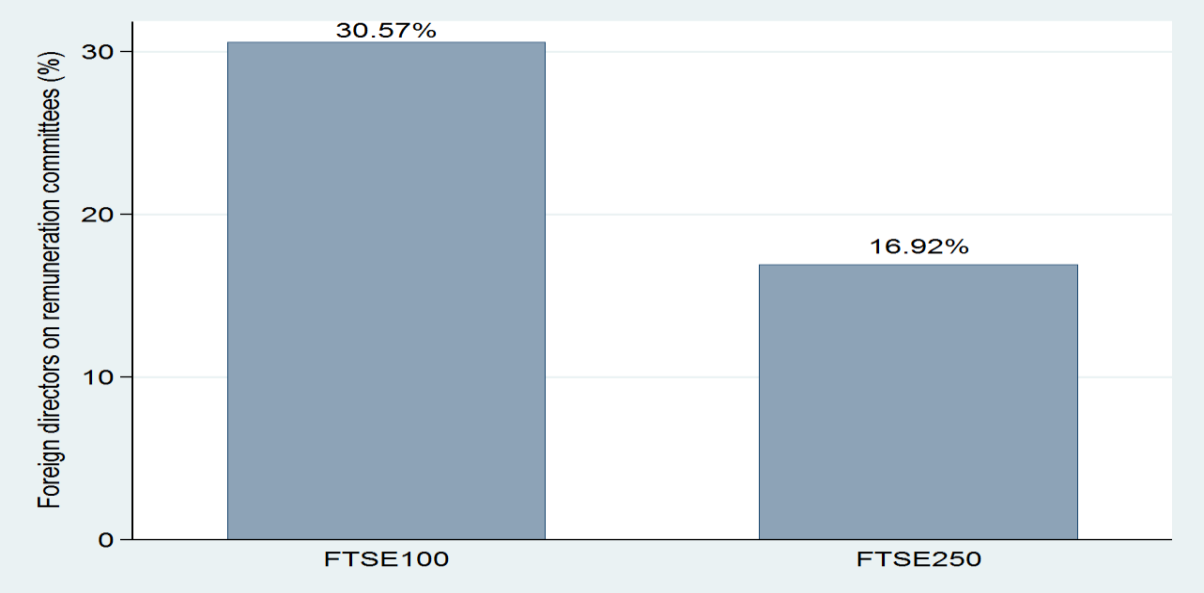


Figure 6.30 Foreign Directors on Remuneration Committees for FTSE 100 and FTSE 250 Non-Financial Firms



6.4 Time Series and Industry Analysis of CEO Pay and Say-on-Pay

This section illustrates the time series trend of CEO remuneration and say-on-pay voting by year and by industry for the UK's FTSE350 firms from 2003 to 2015. Table 6.3 presents the summary of the time series descriptive statistics of say-on-pay voting and CEO remuneration.

6.4.1 CEO pay

Recent financial crises and scandals have created public anger and unrest regarding CEO pay packages, which has led to calls for executive pay reform. According to the High Pay Centre, CEO pay for the FTSE 100 firms has increased from an average of £1 million in 1998 to £4.3 million. Table 6.3 and Figure 6.31 confirm these results.

Table 6.3 and Figure 6.31 show the variation between different types of CEO remuneration (including total remuneration, cash, equity and bonus) for FTSE 350 firms over the period 2003-2015. Figure 6.31 shows that the study sample's firms prefer to use equity remuneration to compensate their CEOs. This may support the agency theory perspective that CEOs' interests are aligned with those of shareholders by providing them with long-term equity

remuneration. Although total CEO remuneration decreased somewhat after the recent financial crisis, overall it has increased from about £1.82 million in 2003 to £3.18 million in 2013 (and decreased to £2.88 in 2015). During the study period, the variability is more noticeable in equity remuneration compared to other types of CEO remuneration. In contrast, CEO cash remuneration (including salary, bonuses and other cash remuneration) was more stable during the period.

Additionally, Figure 6.32 illustrates the variability of different types of CEO remuneration in different industries for FTSE 350 firms from 2003 to 2015. All industries in the sample favour equity-based CEO pay rather than cash remuneration. Furthermore, on average, all industries have similar CEO remuneration; however, the telecommunications industry has the highest average CEO remuneration (about £2.7 million), and the utilities industry has the lowest CEO remuneration, at about £2.5 million. Moreover, both FTSE 100 and FTSE 250 have somewhat similar CEO remuneration (see Figure 6.33).

Figure 6.31 CEO pay (£000s) for FTSE 350 Non-Financial Firms (2003-2015)

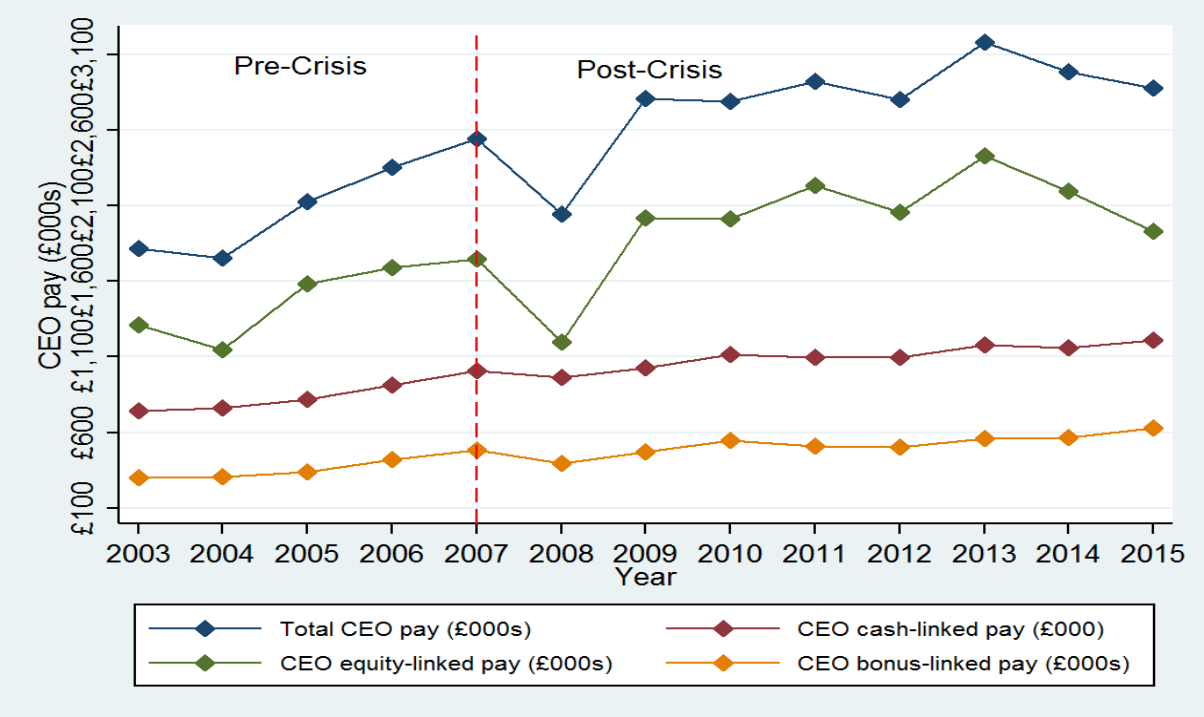


Figure 6.32 CEO pay (£000s) by Industry for FTSE 350 Non-Financial Firms

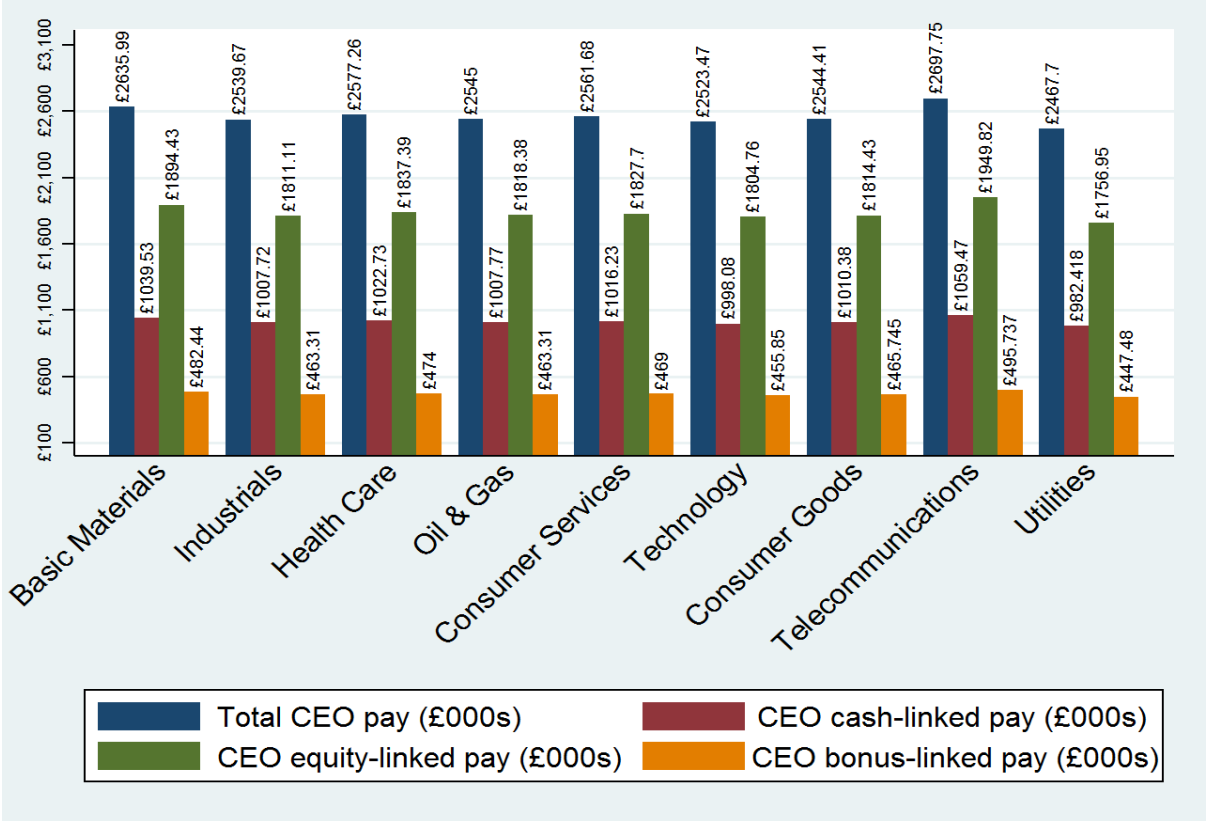


Figure 6.33 CEO pay (£000s) for FTSE 100 and FTSE 250 Non-Financial Firms

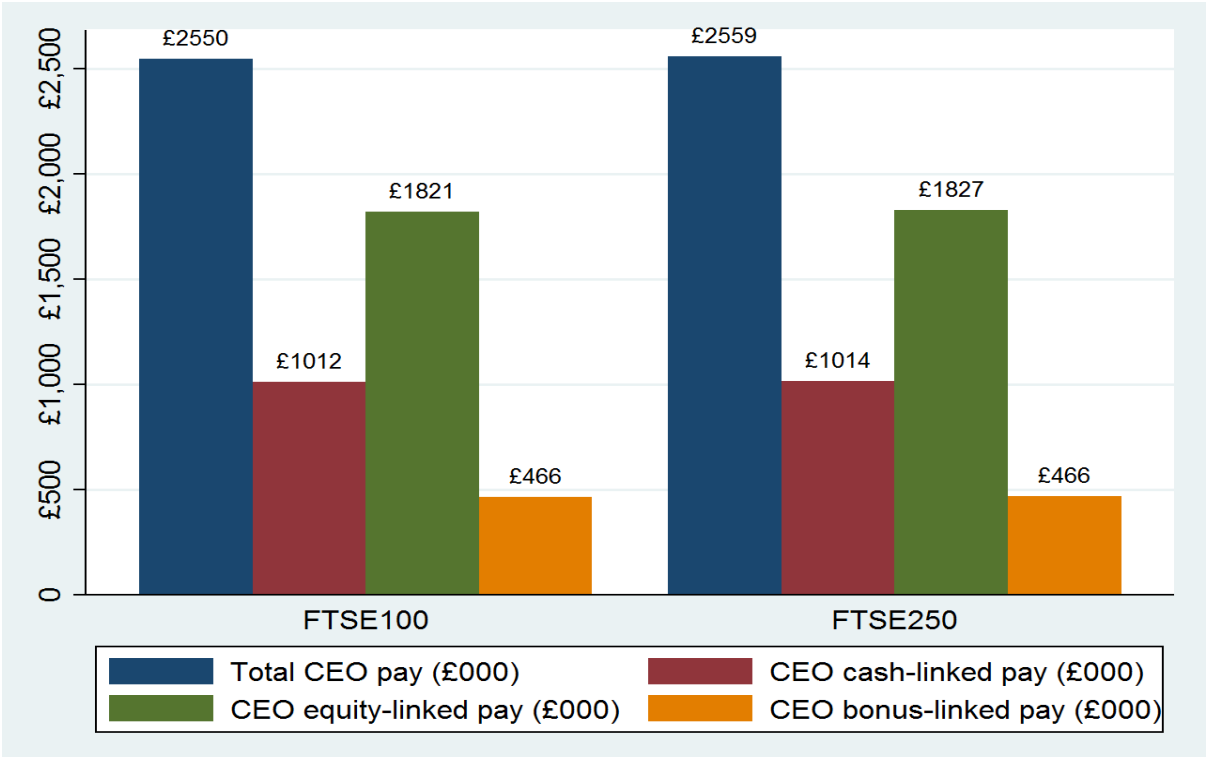


Table 6.3 Time Series Descriptive Statistics of CEO Pay and Say-on-Pay (2003-2015)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
Say-on-Pay For voting														
mean	89.4	92.7	92.9	92.5	93.7	90.4	90.6	90.5	89.8	91.3	92.1	91.8	91.5	91.5
Median	93.2	96.2	96	95.8	97	95.7	95.9	95.2	94	94.8	96.4	96.5	95.9	95.7
SD	10.5	9.96	9.54	9.05	8.48	12.5	12.6	11.9	12.1	9.93	10.5	11.2	10.8	10.8
Min	47.6	38	44	48	60.8	38.8	30.3	40.2	29.9	18.6	47	45.4	39.1	18.6
Max	100	100	100	100	100	100	100	99.9	99.9	99.9	100	100	100	100
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
Say-on-Pay Against voting														
mean	6.26	4.56	4.16	4.57	3.54	6.15	6.71	6.74	7.63	6.51	5.7	5.87	6.51	5.77
Median	2.79	1.8	1.95	2.14	1.4	1.98	2.2	2.96	3.5	3.28	1.68	2.06	2.52	2.2
SD	8.42	8.21	6.93	7.16	6.18	9.92	10.7	9.76	11	8.79	9.15	9.17	9.52	9.03
Min	0	0.01	0	0	0	0	0	0.01	0.03	0.01	0	0	0	0
Max	49.2	59	48.5	51	37.4	59.3	60.7	47.9	61	73	52.3	51.2	57	73
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
Say-on-Pay Abstain voting														
mean	4.31	2.7	2.95	2.93	2.77	3.44	2.66	2.73	2.59	2.15	2.23	2.34	2	2.73
Median	2.94	1.49	1.23	1.39	1.08	1.44	1.11	1	1.21	1.03	0.78	0.91	0.815	1.15
SD	4.54	4.02	4.61	4.45	4.53	5.38	4.16	4.59	4.48	3.06	4.11	4.39	3.77	4.38
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	22.6	28.2	29.7	32.5	28.6	36.6	31.3	29.9	44.1	22.9	29.2	38.1	33	44.1
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
Say-on-Pay Dissent voting														
mean	6.67	4.79	4.43	4.78	3.73	6.57	7.06	7.1	7.89	6.73	5.91	6.16	6.73	6.04
Median	2.89	1.83	1.95	2.19	1.44	2.01	2.22	3.02	3.52	3.31	1.69	2.09	2.54	2.25
SD	9.07	8.71	7.69	7.49	6.53	10.7	11.5	10.5	11.4	9.24	9.44	9.71	9.93	9.57
Min	0	0.01	0	0	0	0	0	0.010	0.03	0.01	0	0	0	0
Max	50.8	60.8	52.4	51.5	38	59.4	66.7	51.6	67	79.7	52.7	51.7	59.3	79.7
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
Total CEO Pay (in £ thousands)														
mean	1816	1755	2124	2352	2540	2045	2808	2791	2922	2803	3181	2987	2878	2557
Median	939	973	1120	1416	1450	1238	1756	1876	1911	2017	2211	2010	2088	1619

Table 6.3 Continued														
SD	2549	2742	4152	3004	3855	2309	3144	2905	4954	2882	4674	3984	3148	3543
Min	100	53	140	59	150	124	58	65	118	149	145	150	150	53
Max	21855	27547	55246	21595	43126	22303	25112	25301	67170	26487	56808	42103	32874	67170
N	178	206	228	235	232	236	238	238	238	229	232	226	212	2928
CEO Cash Pay (in £ thousands)														
mean	746	761	820	915	1010	962	1025	1116	1094	1098	1181	1163	1210	1013
Median	581	610	666	718	836	762	814	925	918	899	944	940	990	824
SD	550	511	554	625	694	715	706	764	738	720	814	763	768	710
Min	5	14	140	59	150	27	45	65	11	18	18	17	150	5
Max	3758	3662	3445	5150	4169	5430	4510	4861	5354	5859	5265	4740	5428	5859
N	178	208	228	235	232	238	239	238	238	229	232	227	212	2934
CEO Bonus Pay (in £ thousands)														
mean	300	305	338	420	487	399	470	547	507	501	563	564	627	455
Median	185	197	223	300	363	264	317	414	364	353	440	422	535	318
SD	380	348	395	505	549	544	536	595	604	590	628	629	495	543
Min	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max	2808	2280	2529	5000	3751	4726	3523	4660	5137	5637	4545	4376	1977	5637
N	177	208	228	235	231	236	234	235	231	224	227	213	31	2710
CEO Equity Pay (in £ thousands)														
mean	1314	1149	1582	1688	1749	1198	2016	2013	2231	2055	2429	2197	1932	1821
Median	516	459	647	784	693	537	1090	1136	1101	1285	1450	1272	1232	933
SD	2416	2531	4330	2840	3748	1914	2774	2549	5114	2731	4651	3845	2737	3401
Min	3	2	4	1	1	0	0	5	3	6	0	1	1	0
Max	21330	25153	54710	19342	42406	17967	20602	21568	65220	25815	54310	39271	28166	65220
N	145	177	188	200	203	212	210	198	195	190	191	187	183	2479

Note that total CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO cash is the natural logarithm of CEO's salary, bonus and other annual cash compensation. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration.

6.4.2 Say-on-pay voting patterns

Say-on-pay voting was introduced in the UK in 2002 and implemented at the end of the 2003 financial year. The purpose of say-on-pay is not to limit CEO remuneration but to engage shareholders in the arrangement of the remuneration report (Alissa, 2015). Therefore, shareholders have three voting options on the annual remuneration reports published by remuneration committees: vote in favour (for), vote against or abstain from voting.

Table 6.3 shows the summary of the three votes for the FTSE 350 non-financial firms from 2003 to 2015. During the sample period, on average, 91.5% of shareholders tended to vote in favour of the annual remuneration report, while only 6% and 3%, respectively, were likely to vote against or to abstain. Figure 6.34 shows the average say-on-pay dissent voting on the annual remuneration reports for FTSE 350 companies over the period 2003-2015. Say-on-pay dissent voting is calculated as the total number of against votes divided by the total number of for, against and abstain votes. The summary by year reveals that the level of shareholders' dissent on the remuneration report continued to be low throughout the sample period (6.04% on average). The dissent level was slightly higher than average in 2003 (about 6.3% on average); however, it went down to a level below 5% until 2007 (where it stood at a bottom point of 3.54%). Again, in 2008, the dissent level showed an apparent increase until 2011, where the shareholder dissent voting was at the peak point of 7.63%. This may indicate that the recent financial crisis and corporate governance reforms (such as the Stewardship Code [2010] and the Davies Report [2011]) gave shareholders more motivation to engage with annual remuneration reports. Shareholder dissent voting saw another dramatic decrease until 2013 (where it stood at 5.7%). In 2013, shareholder dissent voting recovered somewhat to reach 6.51% in 2015. This may be the result of the new amendments in the say-on-pay voting, which gave shareholders a binding vote on the remuneration policy report.

Figure 6.35 reports the overall summary of the shareholder dissent voting across different industries for the FTSE 350 non-financial companies from 2003 to 2015. The telecommunication industry has the highest percentage of shareholders' dissent votes on the annual remuneration report (6.33% on average), whereas the utility industries have the lowest percentage of dissent votes (5.91% on average). All other industries have almost similar shareholder dissent voting.

Figure 6.36 compares shareholder dissent voting between FTSE 100 firms and FTSE 250 firms. It is obvious that FTSE 100 firms are more likely to have higher shareholder dissent voting than FTSE 250 firms do.

Figure 6.34 Say-on-Pay Dissent Voting for FTSE 350 Non-Financial Firms (2003-2015)

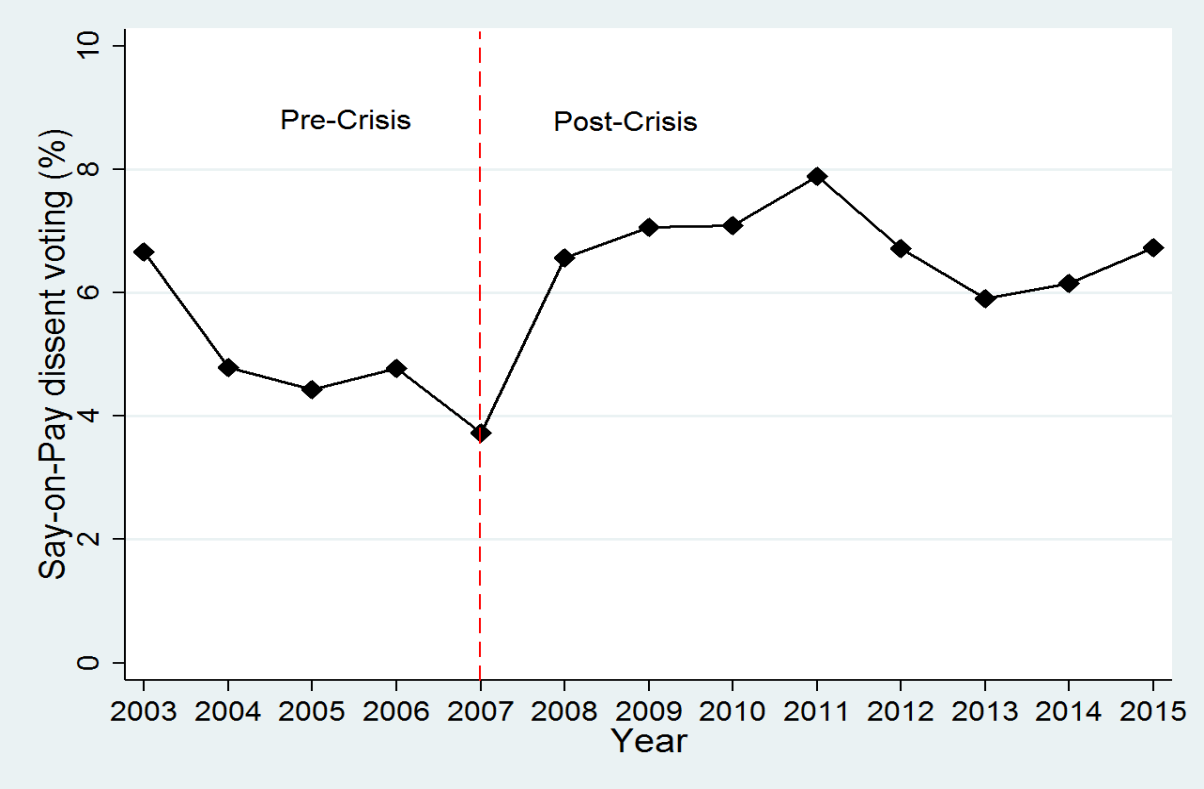


Figure 6.35 Say-on-Pay Dissent Voting by Industry for FTSE 350 Non-Financial Firms

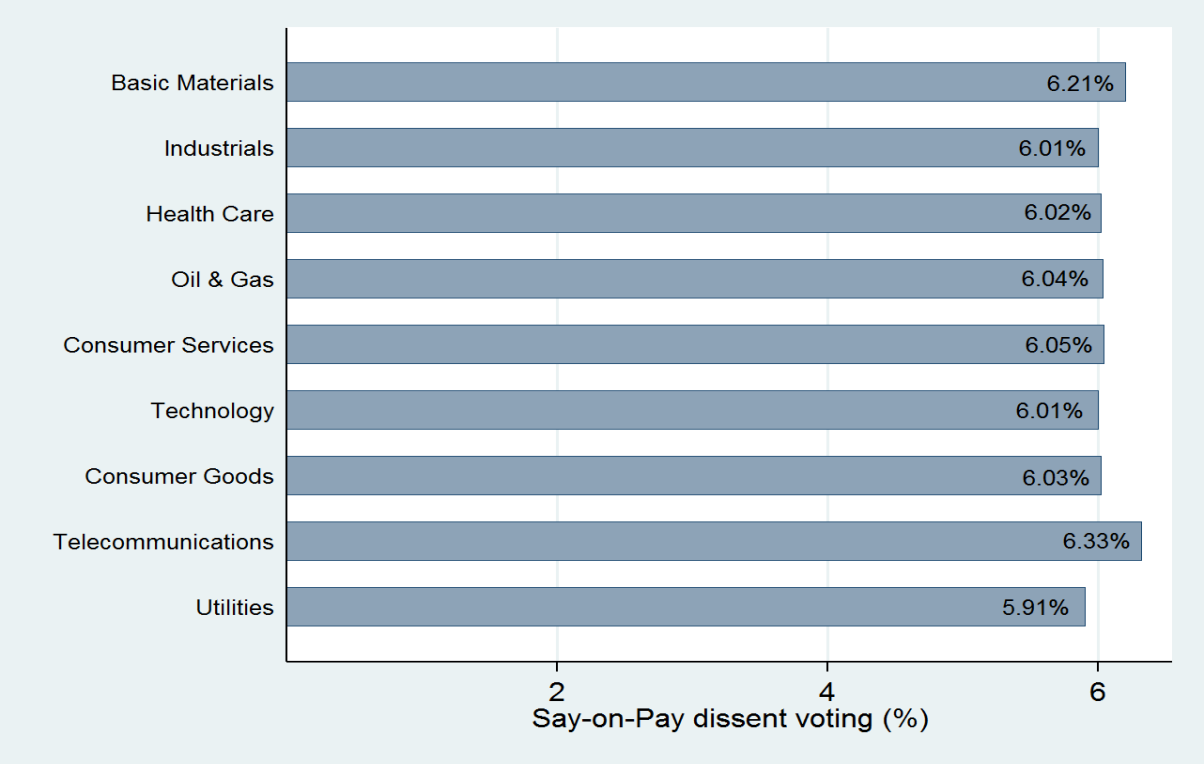
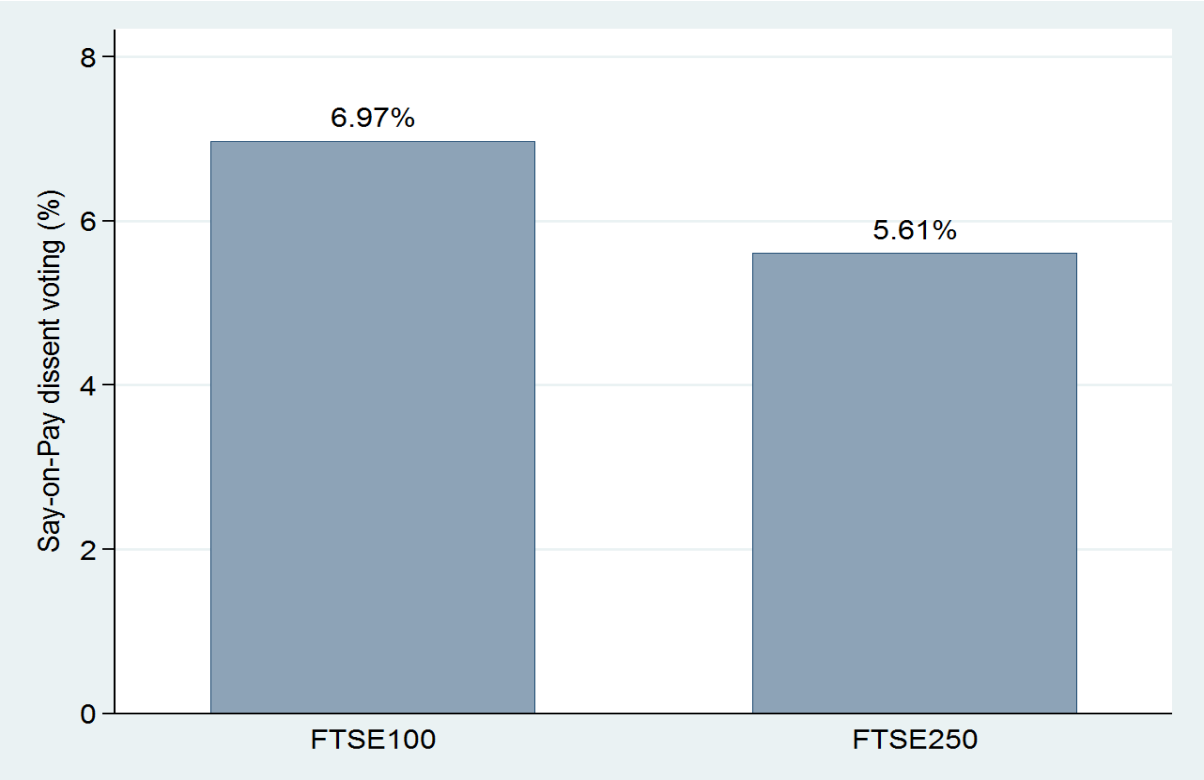


Figure 6.36 Say-on-Pay Dissent Voting by for FTSE 100 and FTSE 350 Non-Financial Firms



6.5 Descriptive Statistics and Correlation Analysis

Before embarking on the empirical analysis, it is essential to discuss descriptive statistics as the initial step to assess similarities and differences between research variables. Descriptive statistics include measures for central tendency (mean and median) and measures for variability (standard deviation). Furthermore, this section includes an analysis for correlation and multi-collinearity. These are explained in detail in the proceeding sub-sections.

6.5.1 Descriptive statistics

Table 6.4 presents descriptive statistics for the different variables used in this study. On average, 6.04% (2.2% median) of investors tended to vote against the remuneration reports over the sample period. This is consistent with previous studies in the UK, such as those of Alissa (2015) and Conyon and Sadler (2010). Furthermore, 17.5% of firms received more than 10% shareholders' dissent on say-on-pay during the sample period. The overall average of CEO total remuneration is about £2.6 million with a median of £1.62 million.

In terms of remuneration committee and board characteristics, women directors represented 14.9% of the total number of directors on the remuneration committee, and foreign directors on the remuneration committee constituted 21.3%; whereas, at the board level, women directors had a mean of 10.4% for the entire period, and foreign directors had a mean of 21.6%.

Regarding remuneration committees, firms with one woman accounted for 37% of the total sample, whereas firms with two or more women accounted for only 11%. Firms with one foreign director formed 25.8% of the total number of directors on the remuneration committee, whereas firms with two or more foreign directors represented 24.6%. The remuneration committee size is approximately four members, whereas the board size is about nine members.

Table 6.4 Descriptive Statistics of the Empirical Study

	Mean	Median	SD	Min	Max	Skewness	Kurtosis	N
Say-on-Pay								
Dissent %	6.04	2.25	9.5	0	79.7	2.87	12.5	2934
Dissent > 10%	0.175	0	0.38	0	1	1.71	3.92	2934
CEO Remuneration								
Total CEO pay (in £ thousands)	2557	1619	3543	53	67170	7.37	94.8	2928
CEO cash pay (in £ thousands)	1013	824	710	5	5859	2.17	10.1	2934
CEO equity pay (in £ thousands)	1821	933	3401	0	65220	8.59	118	2479
CEO bonus pay (in £ thousands)	455	318	543	0	5637	3.33	20.7	2710
Women and foreign directors on remuneration committees and boards								
Women %	14.9	0	17.3	0	75	0.827	2.89	2934
Women = 1	0.37	0	0.48	0	1	0.549	1.3	2934
Women ≥ 2	0.11	0	0.32	0	1	2.46	7.04	2934
Women on board %	10.40	10	10.29	0	57.14	0.746	3	2934
Foreign directors %	21.3	16.7	26	0	100	1.1	3.46	2930
Foreign director = 1	0.258	0	0.437	0	1	1.11	2.23	2934
Foreign directors ≥ 2	0.246	0	0.431	0	1	1.18	2.39	2934
Foreign directors on board %	21.6	14.3	22.6	0	92.3	1.38	4.47	2921
Control variables								
Institutional ownership %	35.6	34.1	20.7	0	99.7	0.365	2.62	2907
Board size	9.06	9	2.37	5	18	0.869	3.67	2921
Remuneration committee size	3.93	4	1.05	2	9	0.862	4.1	2930
Board independence %	55.7	57.1	13.5	0	92.9	-0.576	4.32	2934
Remuneration committee independence %	94.4	100	13.1	25	100	-2.58	9.87	2925
CEO duality	0.13	0	0.337	0	1	2.2	5.83	2934
CEO tenure	5.23	3.8	5.25	1	39.4	2.12	9.1	2925
Log total sales	14.2	14.1	1.52	8.41	19.7	0.35	3.47	2914
Foreign sales %	49.5	55.3	36.1	0	100	-0.136	1.51	2717
MBV	3.73	2.61	11.6	-114	198	5.71	118	2896
Stock return %	15.9	11.7	46	-96.7	410	2	14.2	2929
ROA %	6.4	5.8	8.6	-67	79	-0.115	16.1	2922
Leverage %	23.1	22.3	16.8	0	96.4	0.584	3.11	2921
Price volatility %	27.8	26.3	8.87	11.5	62.4	0.905	3.82	2542

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Dissent >10% is an indicator of 1 if shareholders' dissent is greater than 10%, 0 otherwise. Women is proportion of women from total remuneration committee size. Women=1 is an indicator of 1 if a remuneration committee has one woman. Women≥2 is an indicator of 1 if a remuneration committee has two or more women. Women on board is proportion of women from total board size. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO cash is the natural logarithm of CEO's salary, bonus and other annual cash compensation. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Foreign sales is percentage of total sales that come from a foreign country's operation. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year.

The average percentage of independent non-executive directors on the board and the remuneration committee is approximately 56% and 94%, respectively. Additionally, 13% of the firms tended to combine the posts of CEO and Chair. CEOs, on average, tended to stay on corporate boards for five years, and institutional investors held 36% of the firms' ownership.

Skewness and kurtosis of variables should be within the range of ±1.96 to ±3 for normal distribution (Haniffa and Hudaib, 2006). However, most of the research variables used in this study are not within this recommended range; hence, the variables are non-normally distributed. Wooldridge (2016: 107) states that non-normality of data 'is not a serious problem with large sample size'. There are also many ways to overcome or at least minimise the non-normality concern. First, Greene (2008) has recommended using the logistic transformation of variables or logistic regression (logit model). Furthermore, Wooldridge (2016) suggested using the robustness of standard errors after the regression model.

Previous studies in say-on-pay literature have used the logit model to resolve this problem (e.g. Conyon, 2016; Kimbro and Xu, 2016; Stathopoulos and Voulgaris, 2016). Conyon (2016) has also suggested using logistic transformation for shareholder dissent voting. Additionally, most executive remuneration literature has used logistic transformation for CEO pay (e.g. Core et al., 1999 and Conyon et al., 2016). Therefore, this study uses the three options suggested by prior studies, including using logistic transformation for the OLS model, using the logit model for some regressions and using robust standard errors in all regressions.

6.5.2 Correlation analysis

It is vital to check the correlation between research variables. Correlation analysis is usually used to check for a multi-collinearity problem. Table 6.5 presents Pearson's correlation matrix for the main variables used in this study. Gujarati and Porter (2009) suggested that the

correlation variable between any independent variables should not exceed 80%. Overall, this study has no correlation between independent variables that exceeds 54%; therefore, multi-collinearity is not a concern for this study. The highest correlation between any two independent variables is found between firm size (total sales) and board size (53.45%), indicating that the bigger the firm, the larger the board size.

6.5.3 Variance inflation factors (VIFs) test

Another test for multi-collinearity is to use variance inflation factors (VIFs). To eliminate or at least mitigate the multi-collinearity problem, Wooldridge (2016) has specified that the VIFs should not be more than 5 and that the tolerance factor (1/VIF) should be greater than 0.10. Table 6.6 shows a VIFs test for the two models used in this study: the relationship between women and foreign directors on remuneration committees and say-on-pay dissent voting (Panel A) and the relationship between women and foreign directors on remuneration committees and CEO pay (Panel B). For women and foreign directors say-on-pay framework, the maximum VIF is 2.29 for total sales, and the mean VIF for this framework is 1.38, indicating no serious multi-collinearity problems in this model. In Panel B, the highest VIF was for total sales (2.2), and the average VIF for this model is 1.35; therefore, these numbers suggest that multi-collinearity is not a concern for this study.

Table 6.5 Correlation Matrix

	Log dissent	Dissent>10%	Total CEO pay	CEO cash pay	CEO equity pay	CEO bonus pay	Women %	Women = 1	Women ≥ 2	Foreign directors %	Foreign director = 1	Foreign directors ≥ 2
Log dissent	1											
Dissent >10%	0.8118*	1										
Total CEO pay	0.1274*	0.1350*	1									
CEO cash pay	0.1339*	0.1204*	0.5637*	1								
CEO equity pay	0.1251*	0.1380*	0.9862*	0.4382*	1							
CEO bonus pay	0.1244*	0.1132*	0.4875*	0.9347*	0.3824*	1						
Women %	-0.0180	-0.0276	0.1058*	0.1024*	0.0811*	0.0483*	1					
Women = 1	0.0338	0.0074	0.0802*	0.0495*	0.0727*	0.0217	0.4916*	1				
Women ≥ 2	-0.0250	-0.0189	0.0993*	0.1373*	0.0685*	0.0837*	0.6312*	-0.2710*	1			
Foreign directors %	0.1000*	0.0784*	0.2208*	0.2944*	0.2173*	0.2430*	-0.01	-0.026	0.0415*	1		
Foreign director = 1	0.0298	0.0073	0.0213	0.0488*	0.0171	0.0660*	0.0267	0.0630*	-0.0019	0.1176*	1	
Foreign directors ≥ 2	0.0781*	0.0673*	0.2323*	0.2720*	0.2172*	0.2017*	0.0209	-0.0162	0.1026*	0.8241*	-0.3369*	1
Institutional ownership %	-0.0011	-0.013	-0.2328*	-0.2976*	-0.2333*	-0.2527*	0.0038	0.0244	-0.0471*	-0.2072*	-0.0221	-0.1607*
Board size	0.0455*	0.0269	0.3610*	0.4549*	0.3114*	0.3661*	0.0529*	0.0654*	0.0673*	0.2709*	0.0669*	0.2768*
Remuneration committee size	0.0203	0.0093	0.1646*	0.2222*	0.1123*	0.1420*	0.1428*	0.0930*	0.3142*	0.0641*	0.0530*	0.2357*
Board independence %	0.0917*	0.0798*	0.2143*	0.2457*	0.1744*	0.1414*	0.2219*	0.1617*	0.1719*	0.2278*	0.0315	0.2431*
Remuneration committee independence %	-0.0089	0.0017	-0.0365*	-0.0491*	-0.0550*	-0.0959*	0.0708*	0.0529*	0.0600*	-0.0149	-0.0212	-0.0245
CEO duality	0.0079	0.0348	-0.0810*	-0.0831*	-0.0272	-0.0471*	-0.1063*	-0.0955*	-0.0476*	-0.0102	0.0106	-0.0473*
CEO tenure	-0.0261	-0.0267	0.0155	0.0817*	0.0154	0.0915*	0.0377*	0.0377*	0.0142	-0.0784*	-0.0285	-0.0709*
Log total sales	0.0583*	0.0291	0.3767*	0.4958*	0.3187*	0.3301*	0.1891*	0.1188*	0.1674*	0.2863*	0.0213	0.3045*
Foreign sales %	0.0693*	0.0558*	0.1354*	0.2048*	0.1100*	0.1592*	-0.1051*	-0.0618*	-0.034	0.4080*	0.0839*	0.3583*
MBV	0.0210	0.035	0.0460*	0.0224	0.0493*	0.0289	0.0292	0.0153	0.0158	0.0403*	0.0103	0.0173
Stock return %	0.0095	0.0105	0.0238	-0.0087	0.0333	0.0377	-0.0640*	-0.0550*	-0.0376*	-0.0559*	0.0225	-0.0668*
ROA %	-0.0489*	-0.0403*	0.1069*	0.0698*	0.1282*	0.1028*	-0.0234	0.0067	-0.0143	-0.0328	-0.0275	-0.0259
Leverage %	-0.0171	-0.0175	0.0055	0.0322	-0.0227	-0.0042	0.0408*	-0.0223	0.0584*	0.0518*	-0.0044	0.0656*
Price volatility %	0.0878*	0.0713*	-0.2066*	-0.2664*	-0.1596*	-0.2001*	-0.1754*	-0.1124*	-0.1340*	-0.0337	0.0632*	-0.1010*

Table 6.5 Continued

	Institutional ownership %	Board size	Remuneration committee size	Board independence %	Remuneration committee independence %	CEO duality	CEO tenure	Log total sales	Foreign sales %	MBV	Stock return %	ROA	Leverage %	Price volatility %
Institutional ownership %	1													
Board size	-0.3887*	1												
Remuneration committee size	-0.0656*	0.2882*	1											
Board independence %	-0.0219	0.0530*	0.2614*	1										
Remuneration committee independence %	0.0273	-0.0685*	-0.1011*	0.3698*	1									
CEO duality	-0.0938*	0.0125	-0.1549*	-0.2464*	-0.0129	1								
CEO tenure	0.0581*	0.0237	-0.0448*	-0.1123*	0.0032	0.0733*	1							
Log total sales	-0.3918*	0.5345*	0.2771*	0.3414*	0.0288	-0.1247*	-0.1539*	1						
Foreign sales %	-0.1211*	0.1686*	0.0869*	0.1579*	-0.0046	0.0077	0.0152	0.1103*	1					
MBV	-0.0112	0.0301	0.001	-0.0131	-0.0062	0.0135	-0.0018	-0.0169	-0.0316	1				
Stock return %	0.0093	-0.0706*	-0.0680*	-0.0660*	0.011	0.034	0.0428*	-0.1073*	-0.0042	0.0747*	1			
ROA	-0.0753*	-0.006	-0.0031	-0.0348	0.0009	0.0258	0.0984*	-0.0870*	-0.0368	0.1390*	0.0694*	1		
Leverage %	-0.0873*	0.1420*	0.0589*	0.0275	0.0014	-0.0088	-0.1005*	0.2014*	0.0232	0.0346	-0.1082*	-0.2098*	1	
Price volatility %	0.2041*	-0.2136*	-0.1913*	-0.1251*	0.0272	0.1272*	-0.0237	-0.3213*	0.0702*	-0.0371	0.1612*	-0.1956*	-0.1596*	1

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Dissent >10% is an indicator of 1 if shareholders' dissent is greater than 10%, 0 otherwise. Women is proportion of women from total remuneration committee size. Women=1 is an indicator of 1 if a remuneration committee has one woman. Women≥2 is an indicator of 1 if a remuneration committee has two or more women. Women on board is proportion of women from total board size. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO cash is the natural logarithm of CEO's salary, bonus and other annual cash compensation. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. CEO tenure is number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Foreign sales is percentage of total sales that come from a foreign country's operation. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year.

Table 6.6 Variance Inflation Factors (VIFs) Test

	VIF	1/VIF
Panel A: Impact of women and foreign directors on remuneration committees on say-on-pay dissent voting		
Log total sales	2.29	0.435983
Log CEO pay	1.91	0.522898
Board size	1.87	0.534296
Board independence %	1.74	0.573695
Institutional ownership %	1.38	0.726944
Price volatility %	1.3	0.770579
Remuneration committee size	1.29	0.777128
Foreign directors %	1.25	0.798133
Remuneration committee independence %	1.22	0.818266
ROA %	1.22	0.820562
Leverage %	1.18	0.85093
CEO duality	1.13	0.88834
Women %	1.12	0.894413
Stock return %	1.09	0.914209
Log CEO tenure	1.09	0.921391
MB	1.03	0.970043
Mean VIF	1.38	
Panel B: Impact of women and foreign directors on remuneration committees on CEO pay		
Log total sales	2.2	0.453524
Board size	1.82	0.549224
Board independence %	1.69	0.592231
Foreign sales %	1.45	0.689119
Institutional ownership %	1.41	0.707095
Price volatility %	1.31	0.76199
Remuneration committee size	1.31	0.765243
Foreign directors %	1.3	0.769006
ROA %	1.23	0.811743
Leverage	1.2	0.830417
Remuneration committee independence %	1.19	0.840854
Women %	1.15	0.869382
CEO duality	1.13	0.888375
Log CEO tenure	1.08	0.923734
Stock return %	1.07	0.93789
MB	1.03	0.967689
Mean VIF	1.35	

Note that women is proportion of women from total remuneration committee size. Women=1 is an indicator of 1 if a remuneration committee has one woman. Women≥2 is an indicator of 1 if a remuneration committee has two or more women. Women on board is proportion of women from total board size. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. Foreign sales is percentage of total sales that come from a foreign country's operation. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year.

6.6 Empirical Regression Results

This section reports this study's empirical regression results. First, the relationship between the presence of women and foreign directors on remuneration committees and say-on-pay is estimated. Later, this section investigates whether the presence of women and foreign directors affects CEO pay. Additionally, this section includes an endogenous estimation for the relationship between the presence of women on remuneration committees and say-on-pay and CEO pay. The subsequent sub-sections reveal more details about this research's findings.

6.6.1 Women and foreign directors on remuneration committees and their impact on say-on-pay dissent voting

Table 6.7 contains the results for the regression explaining the impact of women and foreign directors on remuneration committees on the shareholders' dissent via say-on-pay voting. Models (1) and (2) show there is a significant negative relationship between the presence of women directors on the remuneration committee and say-on-pay dissent voting for both the OLS model ($\beta = -0.611$, $t = -3.31$) and the logit model ($\beta = -1.046$, $t = -2.82$). Therefore, Hypothesis 1 is supported, which confirms the study assumption that the presence of women directors on the remuneration committee helps to decrease the chances of extremely high CEO remuneration and aligns the remuneration with shareholders' interests. Hence, shareholders are more likely to be satisfied.

As for foreign directors on remuneration committees, the results in Table 6.7 for both the OLS and logit models (models 3 and 4, respectively) reveal that firms with more foreign directors on the remuneration committee receive more shareholder dissent on the directors' remuneration report ($\beta = 0.366$, $t = 2.50$ and $\beta = 0.510$, $t = 2.02$, respectively). Hence, Hypothesis 5 is confirmed. This is justified because foreign directors may lack effective monitoring. Masulis et al. (2012) have also shown that the presence of foreign directors in the

firms of other countries may signal ineffective monitoring and can lead to higher CEO remuneration.

In models (5) and (6), instead of year dummies, this study controls for different time events captured during the study period, including the financial crisis (2007), the Stewardship Code (2010), the Davies Report (2011) and the say-on-pay mandatory and binding voting (2013), for the estimation of women's influence on say-on-pay. The results remain unchanged for both the OLS model ($\beta = -0.665$, $t = -3.59$) and the logit model ($\beta = -1.068$, $t = -2.91$), which confirms the previous finding in models (1) and (2) that the presence of women directors on remuneration committees leads to less shareholder dissent when voting on annual remuneration reports.

Similarly, in models (7) and (8), different time-events dummies other than year dummies are included for the estimation of foreign directors' influence on say-on-pay, such as the financial crisis (2007), the Stewardship Code (2010) and the say-on-pay mandatory and binding voting (2013). The results also remain unchanged for both the OLS model and the logit model, implying that the presence of foreign directors leads to more shareholder dissatisfaction when they vote on annual remuneration reports.

Consistent with the results from previous studies (e.g. Alissa, 2015; Carter and Zamora; Conyon and Sadler, 2010; Ferri and Maber, 2013; Gregory-Smith et al., 2014), shareholders' dissent is significantly higher in firms with higher CEO remuneration under both the OLS model and the logit model (see for example in models 1 and 2; $\beta = 0.590$, $t = 11.54$ and $\beta = 0.531$, $t = 5.38$, respectively).

Table 6.7 Impact of Women and Foreign Directors on the Remuneration Committee on Say-on-Pay Dissent Voting

	Model (1) OLS Log dissent	Model (2) Logit Dissent>10	Model (3) OLS Log dissent	Model (4) Logit Dissent>10	Model (5) OLS Log dissent	Model (6) Logit Dissent>10	Model (7) OLS Log dissent	Model (8) Logit Dissent>10
Main variables								
Women directors	-0.611***	-1.046***			-0.665***	-1.068***		
	(-3.31)	(-2.82)			(-3.59)	(-2.91)		
Foreign directors			0.366**	0.510**			0.409***	0.552**
			(2.50)	(2.02)			(2.80)	(2.22)
Control variables								
Log CEO pay	0.590***	0.531***	0.579***	0.504***	0.549***	0.492***	0.539***	0.472***
	(11.54)	(5.38)	(11.16)	(5.25)	(10.86)	(5.07)	(10.50)	(4.99)
Institutional ownership	0.150	-0.00444	0.128	-0.114	0.0998	-0.0704	0.0966	-0.161
	(0.79)	(-0.01)	(0.67)	(-0.35)	(0.52)	(-0.21)	(0.50)	(-0.49)
Board size	0.00497	-0.0321	0.000239	-0.0413	0.0106	-0.0293	0.00556	-0.0394
	(0.29)	(-0.96)	(0.01)	(-1.23)	(0.62)	(-0.88)	(0.32)	(-1.18)
Remuneration committee size	0.0116	0.0187	0.0149	0.00767	0.0175	0.0283	0.0190	0.0146
	(0.38)	(0.29)	(0.48)	(0.12)	(0.56)	(0.44)	(0.61)	(0.24)
Board independence	0.762**	1.228**	0.581*	1.023*	0.654**	1.107*	0.416	0.874
	(2.33)	(2.06)	(1.74)	(1.73)	(1.98)	(1.87)	(1.24)	(1.49)
Remuneration committee	-0.153	-0.0173	-0.108	0.00219	-0.0826	0.0240	-0.0482	0.0331
independence	(-0.54)	(-0.03)	(-0.38)	(0.00)	(-0.29)	(0.05)	(-0.17)	(0.07)
CEO duality	0.283***	0.514***	0.283***	0.540***	0.297***	0.522***	0.300***	0.546***
	(2.66)	(2.83)	(2.62)	(3.07)	(2.79)	(2.89)	(2.78)	(3.11)
Log total sales	0.0384	-0.0846	0.0196	-0.0905	0.0460	-0.0758	0.0268	-0.0840
	(1.16)	(-1.41)	(0.59)	(-1.55)	(1.37)	(-1.28)	(0.79)	(-1.45)
Stock return	-0.153	-0.132	-0.140	-0.111	-0.0922	-0.114	-0.123	-0.148
	(-1.62)	(-0.78)	(-1.47)	(-0.69)	(-1.11)	(-0.79)	(-1.47)	(-1.06)
ROA	-0.645	-1.667**	-0.681	-1.564**	-0.887**	-1.879***	-0.878**	-1.710**
	(-1.50)	(-2.34)	(-1.53)	(-2.25)	(-2.05)	(-2.63)	(-1.98)	(-2.47)
MBV	0.000726	0.00543	0.000253	0.00490	0.00149	0.00594	0.000966	0.00527
	(0.26)	(1.15)	(0.09)	(1.08)	(0.52)	(1.21)	(0.35)	(1.14)
Leverage	0.425*	0.115	0.387*	0.0691	0.407*	0.118	0.358	0.0624
	(1.92)	(0.29)	(1.72)	(0.18)	(1.82)	(0.30)	(1.57)	(0.16)
Price volatility	0.0138***	0.0183**	0.0146***	0.0210***	0.0147***	0.0192**	0.0167***	0.0225***
	(2.90)	(2.20)	(3.02)	(2.61)	(3.08)	(2.35)	(3.45)	(2.85)
Post 2007					-0.0381	0.352**	-0.0387	0.366**

Table 6.7 Continued

					(-0.43)	(2.30)	(-0.43)	(2.45)
Post 2010					0.462***	0.145	0.217**	-0.00319
					(3.88)	(0.70)	(2.39)	(-0.02)
Post 2011					-0.290**	-0.126		
					(-2.37)	(-0.56)		
Post_2013					0.0340	0.0766	-0.134	-0.0994
					(0.32)	(0.39)	(-1.37)	(-0.57)
Year dummies	Yes	Yes	Yes	Yes	No	No	No	No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-9.047***	-5.955***	-8.693***	-5.885***	-9.483***	-6.370***	-10.05***	-9.651***
	(-14.39)	(-5.43)	(-13.58)	(-5.42)	(-15.36)	(-5.75)	(-9.19)	(-4.64)
N	2435	2449	2435	2449	2435	2449	775	780
R2/Pseudo R2	0.157	0.060	0.154	0.059	0.139	0.052	0.157	0.099

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Dissent >10% is an indicator of 1 if shareholders' dissent is greater than 10%, 0 otherwise. Women is proportion of women from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Post 2007 to account for the impact of financial crisis. Post 2010 to account for the impact of Stewardship Code. Post 2011 to account for the impact of Davies Report (2011). Post 2013 account for the impact of say-on-pay mandatory and binding voting. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Regarding control variables, the results reveal that institutional ownership, board size and remuneration committee size have mixed results in relation to dissent votes. CEO duality has a significant positive association with a higher number of shareholder dissent votes for both the OLS model and the logit model. Previous studies, such as Conyon (2016) and Sauerwald et al. (2016), have shown that CEO duality leads to more shareholders' dissent. In addition, the log of net sales has mixed results with shareholders' dissent votes. Firm performance (as measured by ROA) has a marginal significant negative relationship with higher dissent votes under the logit model but not under the OLS model. Firm risk (as measured by price volatility) is positively associated with higher dissent votes for both the OLS model and the logit model.

6.6.2 Two or more women and foreign directors on remuneration committees and their impact on say-on-pay

This study performs an additional test to measure the relationship between the presence of women and foreign directors on remuneration committees and shareholder dissent. Specifically, firms that have only one woman on their remuneration committees and firms that have two or more[12] women on their remuneration committees (see Table 6.8 for a summary of the results) are differentiated to see whether the impact will change. Models (1) and (2) of Table 6.8 show that firms with only one woman on their remuneration committees have an insignificant relationship with shareholders' dissent, whereas models (4) and (5) report that firms with two or more women have a significant negative relationship with shareholder dissent ($\beta = -0.359$, $t = -4.08$ and $\beta = -0.581$, $t = -2.97$, respectively). Thus, Hypothesis 3 is supported, which confirms the view that only one woman on a remuneration committee largely dominated by male directors has no impact on say-on-pay dissent voting,

[12] Since no previous studies have used critical mass theory on board sub-committees, this research suggests that the critical mass (threshold) is 2 given size of the remuneration committee (mean of 4).

as she might be not trusted, may be marginalised or seen as a token. However, when multiple women (two or more) sit on the remuneration committee, they are more likely to improve remuneration policy and to reduce shareholders' dissent via say-on-pay. This is consistent with some prior studies that found only three or more women directors on corporate boards increases firm outcomes, as having only one or two is insufficient (e.g. Joecks et al., 2013; Liu et al., 2014; Torchia et al., 2011).

An additional test is estimated to determine whether the prior findings will vary if firms that have only one foreign director on their remuneration committees and firms that have two or more foreign directors on their remuneration committees are separated (see Table 6.8 for a summary of the results). Models (1) and (2) of Table 6.8 show that firms with only one foreign director on their remuneration committees have no impact on shareholder dissent; however, firms with two or more foreign directors have a significant positive relationship with shareholder dissent for only the OLS mode ($\beta = 0.168$, $t = 2.04$). Thus, Hypothesis 7 is partially supported.

6.6.3 Women and foreign directors on remuneration committees and their impact on CEO pay

Furthermore, this research investigates whether the presence of women and foreign directors on remuneration committees affects CEO remuneration.

Table 6.9 presents regression results for the impact of women and foreign directors on remuneration committees and different types of CEO remunerations, including total CEO remuneration, CEO cash remuneration, CEO equity remuneration and CEO bonus remuneration.

Table 6.8 Two or More Women and Foreign Directors on the Remuneration Committee and the Impact on Shareholders' Dissent Voting

	Model (1) OLS Log dissent	Model (2) Logit Dissent>10	Model (3) OLS Log dissent	Model (4) Logit Dissent>10	Model (5) OLS Log dissent	Model (6) Logit Dissent>10	Model (7) OLS Log dissent	Model (8) Logit Dissent>10
Main variables								
Women = 1	0.0528	0.0701						
	(0.79)	(0.59)						
Foreign directors = 1			0.0261	0.0463				
			(0.36)	(0.37)				
Women ≥ 2					-0.359***	-0.581***		
					(-4.08)	(-2.97)		
Foreign directors ≥ 2							0.168**	0.221
							(2.04)	(1.54)
Control variables								
Log total CEO pay	0.542***	0.478***	0.549***	0.487***	0.553***	0.496***	0.542***	0.476***
	(10.74)	(4.99)	(10.73)	(5.12)	(10.96)	(5.16)	(10.55)	(5.01)
Institutional ownership	0.0386	-0.165	0.0776	-0.189	0.0439	-0.154	0.0819	-0.190
	(0.20)	(-0.49)	(0.40)	(-0.57)	(0.23)	(-0.46)	(0.43)	(-0.57)
Board size	0.0125	-0.0261	0.0117	-0.0322	0.00729	-0.0337	0.00895	-0.0353
	(0.73)	(-0.79)	(0.67)	(-0.98)	(0.42)	(-1.01)	(0.51)	(-1.06)
Remuneration committee size	0.0149	0.0201	0.0131	0.00589	0.0477	0.0739	0.00413	-0.00748
	(0.48)	(0.32)	(0.42)	(0.10)	(1.47)	(1.13)	(0.13)	(-0.12)
Board independence	0.590*	1.045*	0.576*	1.067*	0.564*	0.975	0.483	0.968*
	(1.79)	(1.77)	(1.73)	(1.85)	(1.71)	(1.64)	(1.44)	(1.66)
Remuneration committee independence	-0.115	-0.0671	-0.128	-0.0611	-0.0179	0.0923	-0.0876	-0.0173
	(-0.40)	(-0.13)	(-0.44)	(-0.12)	(-0.06)	(0.18)	(-0.30)	(-0.03)
CEO duality	0.298***	0.525***	0.301***	0.540***	0.314***	0.552***	0.298***	0.540***
	(2.79)	(2.92)	(2.80)	(3.08)	(2.96)	(3.08)	(2.76)	(3.08)
Log total sales	0.0329	-0.0958	0.0354	-0.0723	0.0409	-0.0836	0.0299	-0.0800
	(0.98)	(-1.62)	(1.05)	(-1.25)	(1.22)	(-1.40)	(0.88)	(-1.37)
Stock return	-0.0838	-0.102	-0.126	-0.153	-0.0881	-0.105	-0.122	-0.146
	(-1.01)	(-0.71)	(-1.51)	(-1.10)	(-1.06)	(-0.73)	(-1.46)	(-1.05)
ROA	-0.878**	-1.840***	-0.857*	-1.672**	-0.879**	-1.847***	-0.882**	-1.708**
	(-2.02)	(-2.64)	(-1.93)	(-2.43)	(-2.05)	(-2.61)	(-1.98)	(-2.46)
MBV	0.00153	0.00630	0.00142	0.00598	0.00158	0.00611	0.00121	0.00562

Table 6.8 Continued

	(0.54)	(1.27)	(0.51)	(1.25)	(0.56)	(1.27)	(0.43)	(1.19)
Leverage	0.413*	0.122	0.404*	0.124	0.424*	0.157	0.377*	0.0907
	(1.84)	(0.31)	(1.78)	(0.33)	(1.90)	(0.40)	(1.66)	(0.24)
Price volatility	0.0156***	0.0207**	0.0168***	0.0223***	0.0154***	0.0207**	0.0170***	0.0226***
	(3.27)	(2.57)	(3.49)	(2.83)	(3.25)	(2.54)	(3.51)	(2.87)
Post 2007	-0.0391	0.347**	-0.0446	0.354**	-0.0449	0.344**	-0.0402	0.362**
	(-0.44)	(2.28)	(-0.50)	(2.37)	(-0.51)	(2.25)	(-0.45)	(2.42)
Post 2010	0.452***	0.132	0.224**	0.00360	0.461***	0.144	0.226**	0.00937
	(3.80)	(0.64)	(2.47)	(0.02)	(3.87)	(0.70)	(2.48)	(0.06)
Post 2011	-0.345***	-0.201			-0.307**	-0.151		
	(-2.81)	(-0.91)			(-2.51)	(-0.68)		
Post 2013	-0.0152	-0.00647	-0.130	-0.0948	0.0333	0.0666	-0.131	-0.0980
	(-0.14)	(-0.03)	(-1.33)	(-0.55)	(0.31)	(0.34)	(-1.34)	(-0.57)
Year dummies	No	No	No	No	No	No	No	No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-9.270***	-6.042***	-9.293***	-6.379***	-9.600***	-6.517***	-9.142***	-6.085***
	(-14.97)	(-5.50)	(-14.82)	(-5.89)	(-15.40)	(-5.78)	(-14.45)	(-5.50)
N	2435	2449	2435	2449	2435	2449	2435	2449
R2/Pseudo R2	0.136	0.048	0.132	0.051	0.139	0.052	0.134	0.052

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln (dissent/(1-dissent)). Women = 1 is an indicator of 1 of a remuneration committee has one woman. Women ≥ 2 is an indicator of 1 of a remuneration committee has two or more women. Foreign director = 1 is an indicator of 1 of a remuneration committee has one foreign director. Foreign directors ≥ 2 is an indicator of 1 of a remuneration committee has two or more foreign directors. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Post 2007 to account for the impact of financial crisis. Post 2010 to account for the impact of Stewardship Code. Post 2011 to account for the impact of Davies Report (2011). Post 2013 account for the impact of say-on-pay mandatory and binding voting. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.9 Impact of Women and Foreign Directors on the Remuneration Committee on CEO Pay

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
Women directors	0.150*	-0.102	0.338**	-0.244**				
	(1.84)	(-1.48)	(2.20)	(-2.09)				
Foreign directors					0.166***	0.132***	0.244**	0.297***
					(2.72)	(2.72)	(2.26)	(3.67)
Control variables								
Institutional ownership	-0.0557	-0.0197	-0.171	-0.144	-0.0522	-0.0292	-0.174	-0.170
	(-0.62)	(-0.29)	(-1.10)	(-1.24)	(-0.58)	(-0.42)	(-1.12)	(-1.47)
Board size	0.0751***	0.0443***	0.0647***	0.0516***	0.0726***	0.0431***	0.0600***	0.0494***
	(8.48)	(6.42)	(4.03)	(4.36)	(8.22)	(6.28)	(3.75)	(4.20)
Remuneration committee size	0.000662	0.00703	0.0431	-0.0230	0.00218	0.00803	0.0443*	-0.0215
	(0.04)	(0.66)	(1.85)	(-1.20)	(0.14)	(0.76)	(1.88)	(-1.14)
Board independence	0.939***	0.506***	1.058***	0.797***	0.917***	0.459***	1.031***	0.700***
	(6.69)	(4.84)	(4.56)	(4.33)	(6.53)	(4.42)	(4.43)	(3.77)
Remuneration committee independence	-0.672***	-0.449***	-0.463	-0.751***	-0.636***	-0.438***	-0.400*	-0.729***
	(-5.44)	(-4.17)	(-1.90)	(-3.62)	(-5.23)	(-4.15)	(-1.66)	(-3.61)
CEO duality	-0.305***	-0.0507	-0.382***	-0.0706	-0.305***	-0.0532	-0.383***	-0.0743
	(-6.09)	(-1.37)	(-3.43)	(-1.03)	(-6.09)	(-1.45)	(-3.42)	(-1.09)
Log CEO tenure	0.0493**	0.110***	0.00567	0.103***	0.0514***	0.110***	0.00906	0.103***
	(3.28)	(7.68)	(0.25)	(5.07)	(3.44)	(7.72)	(0.40)	(5.10)
Log total sales	0.225***	0.172***	0.313***	0.216***	0.223***	0.165***	0.313***	0.200***
	(17.42)	(16.24)	(13.04)	(11.60)	(17.07)	(15.34)	(12.91)	(10.77)
Stock return	0.308***	0.127***	0.543***	0.298***	0.309***	0.130***	0.541***	0.304***
	(7.35)	(3.62)	(8.45)	(5.20)	(7.37)	(3.71)	(8.49)	(5.35)
ROA	0.894***	0.622***	0.801*	0.957***	0.872***	0.617***	0.752**	0.956***
	(4.30)	(4.07)	(2.15)	(3.31)	(4.19)	(4.07)	(2.03)	(3.34)
MBV	0.00151	0.00110	0.00276	0.00195	0.00134	0.000936	0.00241	0.00163
	(1.72)	(1.23)	(1.65)	(1.07)	(1.60)	(1.09)	(1.46)	(0.93)
Leverage	0.210*	0.0651	0.239	0.0277	0.188**	0.0571	0.198	0.00817
	(2.31)	(0.90)	(1.43)	(0.19)	(2.07)	(0.79)	(1.20)	(0.06)

Table 6.9 Continued

Price volatility	-0.00837***	-0.00448**	-0.00953*	-0.00488	-0.00844***	-0.00435***	-0.00970**	-0.00453*
	(-4.23)	(-2.96)	(-2.51)	(-1.87)	(-4.25)	(-2.87)	(-2.57)	(-1.74)
Foreign sales	0.00180***	0.00222***	0.00251**	0.00298***	0.00141***	0.00199***	0.00192**	0.00252***
	(4.32)	(7.23)	(3.13)	(5.28)	(3.35)	(6.32)	(2.33)	(4.36)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.970***	3.892***	1.567**	3.008***	3.990***	3.980***	1.580***	3.138***
	(15.78)	(18.35)	(3.07)	(7.99)	(15.66)	(18.68)	(3.02)	(8.35)
N	2150	2150	1920	1742	2150	2150	1920	1742
R^2	0.548	0.484	0.422	0.404	0.549	0.485	0.422	0.406

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women directors is proportion of women directors from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.10 Two or More Women Directors on the Remuneration Committee and the Impact on CEO Pay

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
Women = 1	0.0803*	0.0187	0.0324	-0.00352				
	(1.99)	(0.58)	(0.46)	(-0.06)				
Women $\geq$ 2					-0.0181	-0.0779***	0.0658	-0.104**
					(-0.68)	(-3.79)	(1.42)	(-2.94)
Control variables								
Institutional ownership	-0.140	-0.134*	-0.288	-0.358**	-0.134	-0.117	-0.302*	-0.339**
	(-1.57)	(-2.03)	(-1.95)	(-3.26)	(-1.50)	(-1.77)	(-2.03)	(-3.11)
Board size	0.0863***	0.0522***	0.0805***	0.0617***	0.0853***	0.0527***	0.0794***	0.0626***
	(10.34)	(7.87)	(5.24)	(5.34)	(10.25)	(7.99)	(5.17)	(5.45)
Remuneration committee size	0.0238	0.0170	0.0642**	-0.0117	0.0291	0.0176	0.0673**	-0.0117
	(1.58)	(1.60)	(2.77)	(-0.62)	(1.96)	(1.72)	(2.87)	(-0.64)
Board independence	1.270***	0.786***	1.562***	1.344***	1.270***	0.813***	1.535***	1.381***
	(9.49)	(7.90)	(7.09)	(7.50)	(9.51)	(8.15)	(6.97)	(7.73)
Remuneration committee independence	-0.460***	-0.376***	-0.342	-0.575**	-0.456***	-0.371***	-0.343	-0.560**
	(-3.69)	(-3.52)	(-1.49)	(-2.93)	(-3.66)	(-3.48)	(-1.50)	(-2.85)
CEO duality	-0.284***	-0.0992**	-0.308**	-0.0703	-0.282***	-0.103**	-0.300**	-0.0762
	(-6.00)	(-2.75)	(-3.00)	(-1.06)	(-5.94)	(-2.87)	(-2.94)	(-1.15)
Log CEO tenure	0.0518***	0.103***	0.0138	0.104***	0.0525***	0.104***	0.0130	0.105***
	(3.61)	(7.82)	(0.64)	(5.32)	(3.66)	(7.93)	(0.60)	(5.42)
Log total sales	0.194***	0.148***	0.282***	0.175***	0.196***	0.150***	0.281***	0.178***
	(14.97)	(14.29)	(12.09)	(9.59)	(15.31)	(14.70)	(12.10)	(9.85)
Stock return	0.287***	0.103***	0.510***	0.227***	0.287***	0.101***	0.513***	0.225***
	(8.45)	(3.77)	(9.45)	(4.95)	(8.45)	(3.72)	(9.54)	(4.93)
ROA	0.798**	0.567***	0.942*	1.087***	0.796**	0.570***	0.939*	1.095***
	(3.17)	(4.07)	(2.18)	(4.08)	(3.16)	(4.04)	(2.16)	(4.09)
MBV	0.00274	0.00125	0.00452	0.00214	0.00276	0.00122	0.00457	0.00206
	(1.77)	(1.49)	(1.79)	(1.25)	(1.79)	(1.45)	(1.81)	(1.21)
Leverage	0.0867	-0.0325	0.0858	-0.128	0.0894	-0.0427	0.0970	-0.145
	(0.92)	(-0.45)	(0.53)	(-0.92)	(0.95)	(-0.59)	(0.60)	(-1.04)

Table 6.10 Continued

Price volatility	-0.00970***	-0.00553***	-0.00715*	-0.00510*	-0.00980***	-0.00582***	-0.00698	-0.00550*
	(-4.65)	(-3.61)	(-1.96)	(-1.99)	(-4.68)	(-3.80)	(-1.92)	(-2.14)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.761***	3.907***	0.857*	2.374***	3.720***	3.876***	0.868*	2.324***
	(14.55)	(18.56)	(2.06)	(7.10)	(14.49)	(18.60)	(2.08)	(7.03)
N	2423	2423	2136	1958	2423	2423	2136	1958
R^2	0.502	0.442	0.381	0.356	0.502	0.446	0.381	0.358

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women = 1 is an indicator of 1 of a remuneration committee has one woman. Women ≥ 2 is an indicator of 1 of a remuneration committee has two or more women. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.11 Two or More Foreign Directors on the Remuneration Committee and the Impact on CEO Pay

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
Foreign = 1	-0.00369	-0.0278	-0.0166	0.00792				
	(-0.11)	(-1.13)	(-0.29)	(0.19)				
Foreign $\geq$ 2					0.0661*	0.0687**	0.144***	0.152***
					(1.85)	(2.56)	(2.68)	(3.39)
Control variables								
Institutional ownership	-0.0954	-0.0643	-0.264*	-0.214*	-0.0973	-0.0672	-0.277*	-0.225**
	(-1.05)	(-0.94)	(-1.74)	(-1.92)	(-1.07)	(-0.98)	(-1.83)	(-2.03)
Board size	0.0755***	0.0424***	0.0645***	0.0461***	0.0746***	0.0413***	0.0622***	0.0440***
	(8.67)	(6.19)	(4.13)	(3.98)	(8.62)	(6.03)	(3.99)	(3.80)
Remuneration committee size	0.0273	0.0212*	0.0676**	-0.00816	0.0231	0.0165	0.0573*	-0.0175
	(1.80)	(2.02)	(2.93)	(-0.44)	(1.51)	(1.56)	(2.47)	(-0.93)
Board independence	1.035***	0.532***	1.229***	0.876***	1.007***	0.507***	1.173***	0.813***
	(7.30)	(5.11)	(5.37)	(4.85)	(7.06)	(4.86)	(5.08)	(4.49)
Remuneration committee independence	-0.474***	-0.420***	-0.349	-0.643***	-0.461***	-0.403***	-0.319	-0.615***
	(-3.73)	(-3.94)	(-1.44)	(-3.18)	(-3.60)	(-3.78)	(-1.32)	(-3.04)
CEO duality	-0.279***	-0.0889*	-0.330**	-0.0602	-0.279***	-0.0886**	-0.330***	-0.0612
	(-5.81)	(-2.35)	(-3.21)	(-0.88)	(-5.83)	(-2.37)	(-3.21)	(-0.90)
Log CEO tenure	0.0491***	0.100***	0.0177	0.104***	0.0497***	0.101***	0.0188	0.106***
	(3.31)	(7.22)	(0.81)	(5.22)	(3.34)	(7.28)	(0.86)	(5.34)
Log total sales	0.200***	0.156***	0.290***	0.194***	0.197***	0.153***	0.283***	0.187***
	(15.14)	(14.85)	(11.96)	(10.72)	(14.65)	(14.38)	(11.77)	(10.28)
Stock return	0.286***	0.1000***	0.504***	0.215***	0.287***	0.101***	0.504***	0.217***
	(8.13)	(3.56)	(9.13)	(4.63)	(8.19)	(3.59)	(9.15)	(4.72)
ROA	0.768***	0.648***	0.751	1.096***	0.759***	0.644***	0.739	1.082***
	(3.46)	(4.40)	(1.94)	(3.98)	(3.45)	(4.39)	(1.93)	(3.99)
MBV	0.00166	0.00122	0.00290	0.00193	0.00157	0.00115	0.00258	0.00170
	(1.83)	(1.34)	(1.75)	(1.04)	(1.76)	(1.28)	(1.57)	(0.92)
Leverage	0.0827	-0.0346	0.109	-0.0835	0.0758	-0.0422	0.0889	-0.101
	(0.86)	(-0.46)	(0.65)	(-0.58)	(0.79)	(-0.56)	(0.53)	(-0.70)

Table 6.11 Continued

Price volatility	-0.0111***	-0.00583***	-0.00971**	-0.00668**	-0.0110***	-0.00578***	-0.00936*	-0.00616*
	(-5.27)	(-3.68)	(-2.67)	(-2.60)	(-5.19)	(-3.60)	(-2.55)	(-2.41)
Foreign sales	0.00212***	0.00231***	0.00297***	0.00355***	0.00194***	0.00209***	0.00257**	0.00321***
	(4.98)	(7.54)	(3.67)	(6.26)	(4.54)	(6.66)	(3.18)	(5.59)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.973***	4.041***	1.110*	2.463***	4.027***	4.097***	1.282**	2.863***
	(16.03)	(19.08)	(2.57)	(7.38)	(16.08)	(19.32)	(2.96)	(7.98)
N	2274	2274	2006	1836	2274	2274	2006	1836
R^2	0.514	0.455	0.397	0.375	0.514	0.456	0.399	0.379

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Foreign = 1 is an indicator of 1 of a remuneration committee has one foreign. Foreign ≥ 2 is an indicator of 1 of a remuneration committee has two or more foreign directors. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.12 Impact of Women and Foreign Directors on the Remuneration committee on CEO Pay using Indicators Variables

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
Women dummy	0.0487*	-0.0652**	0.132*	-0.0877**				
	(1.65)	(-2.82)	(2.36)	(-2.29)				
Foreign directors dummy					0.0618**	0.0350	0.110*	0.145***
					(2.04)	(1.48)	(1.93)	(3.55)
Control variables								
Institutional ownership	-0.136	-0.0698	-0.331**	-0.235**	-0.131	-0.0857	-0.320**	-0.263**
	(-1.50)	(-1.03)	(-2.18)	(-2.13)	(-1.44)	(-1.25)	(-2.11)	(-2.37)
Board size	0.0756***	0.0419***	0.0656***	0.0464***	0.0741***	0.0415***	0.0627***	0.0441***
	(8.76)	(6.15)	(4.20)	(4.04)	(8.56)	(6.08)	(4.03)	(3.88)
Remuneration committee size	0.0207	0.0248***	0.0534***	-0.00228	0.0201	0.0165	0.0550***	-0.0205
	(1.34)	(2.30)	(2.32)	(-0.12)	(1.29)	(1.54)	(2.29)	(-1.07)
Board independence	0.938***	0.500***	1.052***	0.807***	0.937***	0.468***	1.064***	0.739***
	(6.66)	(4.80)	(4.56)	(4.48)	(6.64)	(4.51)	(4.64)	(4.10)
Remuneration committee independence	-0.465***	-0.395***	-0.309	-0.598***	-0.438***	-0.394***	-0.269	-0.572***
	(-3.69)	(-3.73)	(-1.26)	(-2.96)	(-3.53)	(-3.80)	(-1.10)	(-2.93)
CEO duality	-0.272***	-0.0810***	-0.316***	-0.0449	-0.271***	-0.0813***	-0.314***	-0.0451
	(-5.68)	(-2.15)	(-3.08)	(-0.66)	(-5.66)	(-2.16)	(-3.04)	(-0.67)
Log CEO tenure	0.0440***	0.1000***	0.00667	0.103***	0.0461***	0.0989***	0.0115	0.103***
	(2.94)	(7.18)	(0.30)	(5.22)	(3.11)	(7.12)	(0.52)	(5.19)
Log total sales	0.197***	0.159***	0.282***	0.198***	0.196***	0.154***	0.283***	0.185***
	(14.88)	(15.30)	(11.58)	(10.99)	(14.70)	(14.58)	(11.27)	(10.23)
Stock return	0.310***	0.123***	0.506***	0.280***	0.308***	0.127***	0.497***	0.284***
	(7.36)	(3.59)	(7.91)	(5.02)	(7.30)	(3.69)	(7.81)	(5.09)
ROA	0.643**	0.565***	0.577	0.884**	0.647***	0.563***	0.578	0.898**
	(2.91)	(3.70)	(1.52)	(3.20)	(2.92)	(3.73)	(1.52)	(3.27)

Table 6.12 Continued

MBV	0.00185**	0.00141	0.00308*	0.00215	0.00182**	0.00138	0.00293*	0.00208
	(2.01)	(1.57)	(1.84)	(1.17)	(2.05)	(1.54)	(1.76)	(1.15)
Leverage	0.0968	-0.0324	0.130	-0.0824	0.0851	-0.0302	0.105	-0.0863
	(1.02)	(-0.44)	(0.78)	(-0.58)	(0.90)	(-0.41)	(0.64)	(-0.61)
Price volatility	-0.0107***	-0.0058***	-0.00876**	-0.00650**	-0.0108***	-0.00558***	-0.00895**	-0.00619**
	(-5.09)	(-3.66)	(-2.42)	(-2.55)	(-5.14)	(-3.54)	(-2.48)	(-2.45)
Foreign sales	0.00211***	0.00220***	0.00300***	0.00346***	0.00182***	0.00211***	0.00245***	0.00296***
	(5.01)	(7.22)	(3.74)	(6.11)	(4.27)	(6.81)	(2.86)	(5.19)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.756***	4.006***	0.985**	2.887***	3.783***	4.106***	0.991**	3.088***
	(15.86)	(19.78)	(2.20)	(8.30)	(15.78)	(19.92)	(2.16)	(8.87)
N	2270	2270	2002	1833	2270	2270	2002	1833
R^2	0.521	0.463	0.406	0.392	0.522	0.462	0.406	0.395

Note that Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women dummy is an indicator of 1 if firm has at least one woman director on its remuneration committees, 0 otherwise. Foreign directors is dummy is an indicator of 1 if firm has at least one foreign director on its remuneration committee, 0 otherwise. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Model (1) reveals there is a marginal significant positive relationship between women directors on remuneration committees and total CEO remuneration (β = 0.150, t = 1.84). Model (2) repeats the same regression but with CEO cash remuneration. The results in model (2) show there is a negative association (but not significant) between the presence of women directors on remuneration committees and CEO cash pay. However, there is a significant negative relationship between women directors on remuneration committees and CEO bonus remuneration (β = -0.244, t = -2.09; see model [4]). CEO equity remuneration has a significant positive relationship with women directors on remuneration committees (β = 0.338, t = 2.20).

Contrary to Hypothesis 2's predictions, results from Table 6.9 show that the relationship between women directors on remuneration committees and different types of CEO remunerations are mixed. Therefore, Hypothesis 2 is partially rejected. Overall, women directors on remuneration committees lead to fewer CEO cash incentives in terms of bonuses; however, their presence on remuneration committees leads to more CEO equity-based incentives. This implies that firms with more women directors on remuneration committees prefer long-term incentive plans, such as equity remuneration. Previous studies based on the agent-based model found that the increased use of equity remuneration has strengthened the relationship between CEO remuneration and firm performance (e.g, Main et al., 1996; Murphy, 1999).

The results in Table 6.9, model (5), show a significant positive effect of foreign directors on total CEO pay (β = 0.166, t = 2.72), suggesting that foreign directors are less effective monitors and can lead to higher CEO remuneration (Masulis et al., 2012). Thus, Hypothesis 6 is supported. Additionally, the same regression in model 1 is repeated but with different measures of CEO remuneration, including CEO cash pay, CEO equity pay and CEO bonus pay. The results of these regressions (models 6-8) confirm the previous findings in model (1)

[$\beta = 0.132$, $t = 2.72$, $\beta = 0.244$, $t = 2.26$ and $\beta = 0.297$, $t = 3.68$], indicating the presence of foreign directors on remuneration committees can lead to higher CEO remuneration.

As for other corporate governance control variables, board size has a significant positive association with total CEO remunerations. This is consistent with previous studies, such as Core et al. (1999), Ozkan (2007) and van Essen et al. (2015). This suggests that larger boards lead to miscommunication and a lack of organisation among directors, which means they are more likely to provide infective monitoring (Bebchuk and Fried, 2003). Similarly, and consistent with Core et al. (1999), Ozkan (2007) and van Essen et al. (2015), Table 6.9 shows that a higher proportion of non-executive independent directors leads to higher total CEO remuneration. In contrast, remuneration committee independence is found to be effective and significant in reducing CEO remuneration. As for CEO duality, the results in Table 6.9 reveal the relationship between CEO duality and CEO remuneration is mixed. This is consistent with some previous UK studies, such as Conyon (1997) and Conyon and Peck (1998). In contrast, CEO tenure is found to be significantly and positively associated with more total CEO remuneration.

As for firm characteristics, firm size, as measured by total sales, has a significant and positive relationship with total CEO remuneration, implying that larger firms tend to distribute more CEO remuneration. This result confirms some previous studies, such as Tosi et al. (2000) and van Essen et al. (2015). Similarly, a higher proportion of foreign sales leads to more CEO remuneration. Masulis et al. (2012) have argued that firms with international operations, require experienced CEOs, and ultimately, experienced CEOs require higher remuneration. Table 6.9 also reports that firms with higher firm performance, as measured by both stock return and ROA, tend to have higher CEO remuneration. Unpredictably, results show that firms with more stock price volatility have less CEO remuneration.

6.6.4 Two or more women and foreign directors on remuneration committees and their impact on CEO pay

This study also tests whether two or more women and foreign directors on remuneration committees affects CEO remuneration.

Tables 10 and 11 show the results for the impact of two or more women and foreign directors on remuneration committees and CEO pays (including total CEO remuneration, CEO cash remuneration, CEO equity remuneration and CEO bonus remuneration).

Model (1) of Table 10 shows that remuneration committees with only one woman can lead to more CEO remuneration ($\beta = 0.803$, $t = 1.99$). Although, model (5) shows there is no significant relationship between two women and more directors on remuneration committees and total CEO remuneration, models 6 and 8 show a significant relationship between two women and more directors on remuneration committees and, CEO cash remuneration and CEO bonus remuneration ($\beta = -0.0779$, $t = -3.79$; $\beta = -0.104$, $t = -2.94$, respectively). Thus, Hypothesis 4 is partially supported, which may indicate that only one woman on a remuneration committee largely dominated by male directors has no impact on reducing CEO pay, as they might be not trusted and seen as a token. However, when two or more women sit on the remuneration committee, they are more likely to reduce CEO cash payments. This is consistent with some previous studies (e.g. Joecks et al., 2013; Liu et al., 2014; Torchia et al., 2011).

For foreign directors, models (1-4) of Table 6.11 reveal that firms with only one foreign director on their remuneration committees have no impact on CEO remuneration; however, firms with two or more foreign directors have a significant positive relationship with all types of CEO remunerations, including total CEO remuneration, CEO cash remuneration, CEO

equity remuneration and CEO bonus remuneration (β = 0.066, t = 1.85, β = 0.068, t = 2.56, β = 0.144, t = 2.68 and β = 0.150, t = 3.39, respectively). Thus, Hypothesis 8 is supported.

6.6.5 Women and foreign directors on remuneration committees and their impact on CEO pay: further test

In this sub-section, further analysis is performed to test the relationship between the presence of women and foreign directors on remuneration committees and CEO remuneration; however, this time indicator variables (instead of continuous variables) are used to measure women and foreign directors, following Bugeja et al. (2015) and Masulis et al. (2012). Hence, women directors are measured as an indicator variable if firms have at least one woman director on their remuneration committees (women dummy). Similarly, foreign directors are measured as an indicator variable if firms have at least one foreign director on their remuneration committees (foreign directors dummy).

Table 6.12 reveals the results of women and foreign directors on remuneration committees and their influence on CEO pay using indicator variables. For women directors, results remain relatively unchanged, except that in model (2), women directors have a more significant negative impact on CEO cash remuneration. As for foreign directors, the results remain consistent with the previous results in Table 6.9, except that foreign directors become less effective on CEO cash remuneration but still have a positive significant relationship in total CEO remuneration, CEO equity remuneration and CEO bonus remuneration.

6.6.6 Endogenous estimations

To ensure the robustness of the relationship between the presence of women and foreign directors on remuneration committees and say-on-pay dissent voting, this research uses propensity score matching, following Bugeja et al. (2015) and Stathopoulos and Voulgaris (2016); whereas, the impact of women and foreign directors on remuneration committees on

CEO pay is also estimated using propensity score matching, following Armstrong and Ittner (2012), Bugeja et al. (2015) and Conyon et al. (2016), and the two-system generalised method of moments estimation (GMM), following Gregory-Smith (2012) and Lucas-Pérez et al. (2015).

i. Propensity score matching

First, this study runs propensity score matching (Rosenbaum and Rubin, 1983) to control for the self-selection bias and causality that may exist between women and foreign directors on remuneration committees and say-on-pay dissent voting. Firms with and without women or foreign directors on their remuneration committees are matched using a nearest-neighbour algorithm with a calliper (and with no replacement)[13]. Following Bugeja et al. (2015), this study runs different matches based on different criteria. The first matching is based on the probability that a firm has at least one female on the remuneration committee (treatment variable) and is contingent upon firm size, board size, the percentage of women on the board and all other control variables (covariates variables). The second matching is based on the likelihood that a firm has at least one foreign director on the remuneration committee (treatment variable), depending upon firm size, board size, the percentage of foreign on the board and other control variables (covariates variables). The inclusion of these covariates is justified, as large firms or large boards tend to include more women (Adams and Ferreira, 2009; Carter et al., 2003), and firms with more women on the board might have more women on the remuneration committee (Bugeja et al., 2015).

Table 6.1 shows the descriptive statistics of matched firms with and without women and foreign directors on their remuneration committees. Somers' D non-parametric test in Table 6.11 shows that firm size, board size and women and foreign directors on the board are not

[13] This study uses the psmatch2 command in Stata to estimate propensity matching.

significant, indicating that self-selection bias is becoming less of a concern. Remarkably, board size is negatively significant with firms that have women on their remuneration committees, indicating the presence of women on remuneration committees is not a result of a larger board size.

Similar regressions to those in Tables 6.7, 6.8 and 6.9 are estimated after matching. Table 6.13 shows the results are similar to the previous findings in Table 6.7, suggesting that women directors are negatively associated with shareholders' dissent voting for both the OLS model and the logit model (β = -1.147, t = -3.52 and β = -1.640, t = -2.37, respectively). The results in Table 6.14 also confirm the previous findings in that foreign directors are positively driving shareholder dissent voting (β = 0.0339, t = 2.71 and β = 0.752, t = 1.92, respectively).

Propensity score matching is also used for the second test of two or more women and two or more foreign directors on remuneration committees and their impact on shareholders' dissent. Table 6.15 reports that firms with two or more women on remuneration committees have a significant negative impact on shareholders' dissent for the OLS model (β = -0.543, t = -4.27) and for the logit model (β = -0.789, t = -2.92), while firms with only one woman on their remuneration committees have no impact. These results are consistent with the previous findings in Table 6.8. Similarly, firms with only two or more foreign directors have a significant positive influence on shareholder dissent voting via say-on-pay for both the OLS model and the logit model (β = 0.017, t = 2.42 and β = 0.397, t = 1.87, respectively). These results are also consistent with the previous findings in Table 6.8.

Furthermore, propensity score matching is used for the relationship between women and foreign directors on remuneration committees and CEO pay. Table 6.16 shows there is no impact between women on remuneration committees and total CEO remuneration. However, there is a negative significant relationship between women directors on remuneration

committees and CEO cash remuneration (β = -0.302, t = -2.96) and CEO bonus cash remuneration (β = -0.471, t = -2.65); this is relatively consistent with the previous findings in Table 6.9. Also, consistent with the prior results in Table 6.9, firms with more women on their remuneration committees are more likely to prefer equity-based remuneration for CEOs (β = 1.454, t = 2.93). Table 6.16 confirms that foreign directors on remuneration committees have a significant positive relationship with total CEO remuneration (β = 0.176, t = 2.02). Furthermore, the presence of foreign directors on remuneration committees was positively related to CEO equity (β = 0.279, t = 1.71) and bonus remuneration (β = 0.229, t = 1.97). However, after propensity score matching, no impact was found between foreign directors on remuneration committees and CEO cash pay.

Consistent with the previous results in Table 10, Table 6.17 shows that there is a significant relationship between two or more women on remuneration committees and, CEO cash remuneration and CEO bonus remuneration after running propensity score matching (β = -0.073, t = -2.71 and β = -0.098, t = -2.54, respectively). Similar to previous results in Table 11, Table 6.18 reveals that only presence of two or more foreign directors on remuneration committees have impact on CEO remuneration; this include CEO total remuneration (β = 0.179, t = 1.80), CEO cash remuneration (β = 0.230, t = 3.14) and CEO bonus remuneration (β = 0.359, t = 2.72).

ii. Two-system GMM

The two-system GMM is ideal when the dependent variable is dynamic (high movement) and when independent variables rarely change over time (Arellano and Bond, 1991). Gregory-Smith (2012) argued that board size and other board characteristics have little movement over time. Furthermore, two-system GMM is an ideal control for autocorrelation of errors over time and heteroscedasticity between firms (Lucas-Pérez et al., 2015).

Table 6.19 presents the impact of women and foreign directors on remuneration committees regarding CEO remuneration using two-system GMM[14]. The findings in Table 6.19 are extremely similar to Table 6.9, suggesting the presence of women directors on remuneration committees leads to less cash remuneration in terms of bonuses (β = -0.239, t = -1.89) and to more equity-based CEO remuneration (β = 0.282, t = 1.68). This confirms the previous results in Table 6.9, which showed the presence of foreign directors on remuneration committees was significant and positively related to total CEO pay (β = 0.193, t = 2.36), CEO cash pay (β = 0.110, t = 1.66), CEO equity pay (β = 0.361, t = 1.84) and CEO bonus pay (β = 0.316, t = 2.94).

Tables 6.20 and 6.21 show the impact of two or more women on remuneration committees on CEO pay using two-system GMM. The results in Table 6.20 are similar to Table 6.10, revealing that only presence of two or more women on remuneration committees can lead to less CEO cash remuneration (β = -0.072, t = -2.87) and less CEO bonus remuneration (β = -0.074, t = -1.83). Also, Table 6.21 shows similar results to Table 6.11, suggesting that only firms with two or more foreign directors on their remuneration committees have significant and positively impact on total CEO remuneration (β = 0.115, t = 2.13), CEO cash remuneration (β = 0.079, t = 2.03), CEO equity remuneration (β = 0.137, t = 1.99) and CEO bonus remuneration (β = 0.291, t = 3.89).

[14] This study uses the xtabond2 command in Stata to estimate two-system GMM.

Table 6.13 Descriptive Statistics of Matched Firms with and without Women and Foreign Directors on the Remuneration Committee

	Mean	Median	Mean	Median	z	P>|z|
Panel A	Firms with only male on remuneration committee		Firms with gender-diverse remuneration committee		Somers'D non-parametric test	
Log dissent	7.50	4.1	6.15	2.45	-3.41***	0.001
Dissent > 10%	0.255	0.00	0.173	0.00	-1.7*	0.090
Women %	0.00	0.00	30.82	25.00	7.78***	0.000
Women = 1	0.00	0.00	0.754	1.00	27.53***	0.000
Women ≥ 2	0.00	0.00	0.235	0.00	15.00***	0.000
Women on board %	18.30	16.70	18.00	16.70	-1.45	0.145
Log CEO pay	7.77	7.69	7.63	7.64	-2.40**	0.016
Log CEO cash pay	7.07	7.08	6.82	6.82	-3.48***	0.000
Log CEO equity pay	6.82	7.14	7.05	7.12	-1.11	0.268
Log CEO bonus pay	6.30	6.38	6.02	6.10	-3.37***	0.001
Institutional ownership %	30.80	28.40	35.60	33.70	2.01**	0.045
Board size	10.22	10.00	9.32	9.77	-3.45***	0.001
Remuneration committee size	3.66	4.00	4.24	4.00	4.70***	0.000
Board independence %	58.80	60.00	59.80	60.00	-1.91*	0.056
Remuneration committee independence %	94.60	100	95.10	100	-1.49	0.136
CEO duality	0.112	0.00	0.079	0.00	-0.38	0.706
Log CEO tenure	1.23	1.38	1.19	1.36	-0.31	0.754
Log total sales	14.79	14.56	14.55	14.42	-1.55	0.120
MBV	2.37	2.71	4.05	2.75	0.87	0.387
Stock return %	15.50	9.80	12.20	9.30	-0.95	0.344
ROA %	6.60	5.82	6.40	5.70	-0.37	0.709
Leverage %	24.30	22.70	23.50	22.90	0.12	0.901
Price volatility %	25.62	25.85	25.83	24.54	0.37	0.711
Foreign sales %	47.98	56.61	46.21	50.17	-1.05	0.293
Panel B	Firms without foreign directors on remuneration committee		Firms with foreign directors on remuneration committee			
Log dissent	5.11	2.30	7.10	3.05	0.63	0.531
Dissent > 10%	0.17	0.00	0.21	0.00	0.56	0.574
Foreign directors %	0.00	0.00	43.00	33.33	7.78***	0.000
Foreign director = 1	0.00	0.00	0.52	1.00	24.40***	0.000
Foreign directors ≥ 2	0.00	0.00	0.480	0.00	22.88***	0.000
Foreign directors on board %	36.4	36.4	37.03	36.40	0.03	0.976
Log CEO pay	7.63	7.70	7.70	7.70	1.68*	0.092
Log CEO cash pay	7.00	7.08	6.90	6.90	0.82	0.415

Table 6.13 Continued						
Log CEO equity pay	6.88	7.05	7.14	7.21	1.65*	0.100
Log CEO bonus pay	6.17	6.14	6.14	6.23	1.87*	0.062
Institutional ownership %	26.32	22.65	31.32	27.91	2.16**	0.031
Board size	10.19	10.00	9.34	9.00	-1.62	0.11
Remuneration committee size	3.59	4.00	4.16	4.00	4.90***	0.000
Board independence %	54.65	54.54	59.31	60.00	1.99	0.046
Remuneration committee independence %	94.10	100	94.32	100	0.25	0.802
CEO duality	0.08	0.00	0.11	0.00	1.04	0.300
Log CEO tenure	1.27	1.33	1.07	1.22	-0.07	0.98
Log total sales	14.76	14.86	14.63	14.47	-0.30	0.765
MBV	1.88	1.94	3.95	2.65	1.00	0.316
Stock return %	5.33	6.06	14.17	10.00	1.86*	0.062
ROA %	3.74	4.92	5.87	5.75	3.39	0.001
Leverage %	25.62	26.86	24.15	23.85	-0.69	0.490
Price volatility %	30.00	27.34	27.23	25.60	-2.43**	0.015
Foreign sales %	69.47	82.73	62.37	70.6	-0.65	0.517

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent. Dissent > 10% is an indicator of 1 if shareholders' dissent is greater than 10%, 0 otherwise. Women is proportion of women from total remuneration committee size. Women=1 is an indicator of 1 of a remuneration committee has one woman. Women ≥ 2 is an indicator of 1 of a remuneration committee has two or more women. Women on board is proportion of women from total board size. Women dummy an indicator variable if firms have at least one woman director on their remuneration committees. Foreign directors is proportion of foreign directors from total remuneration committee size. Foreign director = 1 is an indicator of 1 of a remuneration committee has one foreign director. Foreign directors ≥ 2 is an indicator of 1 of a remuneration committee has two or more foreign directors. Foreign directors on board is proportion of foreign directors from total board size. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO cash is the natural logarithm of CEO's salary, bonus and other annual cash compensation. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.14 Impact of Women and Foreign Directors on the Remuneration Committee on Say-on-Pay Dissent Voting for the Post-Match Sample

	Model (1) OLS Log dissent	Model (2) Logit Dissent > 10	Model (3) OLS Log dissent	Model (4) Logit Dissent > 10	Model (5) OLS Log dissent	Model (6) Logit Dissent > 10	Model (7) OLS Log dissent	Model (8) Logit Dissent > 10
Main variables								
Women directors	-1.150***	-1.799**			-1.230***	-1.862**		
	(-3.01)	(-2.45)			(-2.76)	(-2.44)		
Foreign directors			0.0379***	0.750*			0.0396***	0.823**
			(3.00)	(1.84)			(3.06)	(2.01)
Control variables								
Log CEO pay	0.497***	0.536***	0.0148***	0.412*	0.453***	0.427**	0.0130***	0.393
	(5.26)	(2.57)	(3.05)	(1.78)	(5.18)	(2.49)	(2.58)	(1.60)
Institutional ownership	0.647*	1.876***	0.0191	0.0369	0.350	1.152*	0.0227	0.150
	(1.66)	(2.64)	(0.98)	(0.06)	(0.84)	(1.74)	(1.15)	(0.24)
Board size	0.0459	0.0170	0.00207	0.0414	0.0529	0.0261	0.00242	0.0425
	(1.25)	(0.26)	(1.05)	(0.57)	(1.14)	(0.32)	(0.99)	(0.51)
Remuneration committee size	0.134	0.692	0.00182	0.0940	-0.197	0.225	-0.0142	-0.403
	(0.19)	(0.53)	(0.06)	(0.07)	(-0.24)	(0.16)	(-0.43)	(-0.31)
Board independence	0.117**	0.165	0.00000315	0.0799	0.117*	0.156	0.000932	0.112
	(1.97)	(1.21)	(0.00)	(0.73)	(1.77)	(1.10)	(0.32)	(0.96)
Remuneration committee independence	0.582	1.745	0.0568**	2.380***	0.788	1.965	0.0605**	2.598***
	(1.08)	(1.31)	(2.39)	(2.60)	(1.42)	(1.42)	(2.32)	(2.58)
CEO duality	0.558***	1.540***	0.0154	0.734**	0.629***	1.520***	0.0118	0.615
	(2.66)	(4.18)	(1.30)	(2.13)	(2.96)	(4.14)	(0.90)	(1.42)
Log total sales	-0.0255	-0.136	-0.00182	-0.153	-0.0589	-0.190	-0.00134	-0.141
	(-0.41)	(-1.17)	(-0.59)	(-1.57)	(-0.70)	(-1.31)	(-0.41)	(-1.45)
Stock return	-0.00646	0.000120	0.000328	0.0200*	-0.0102	-0.00539	0.000368	0.0203*
	(-1.20)	(0.02)	(0.95)	(1.66)	(-1.39)	(-0.83)	(1.03)	(1.70)
ROA	0.0564	0.113	0.00388	-0.162	-0.195	-0.232	-0.000275	-0.130
	(0.36)	(0.37)	(0.45)	(-0.55)	(-1.24)	(-0.75)	(-0.03)	(-0.41)
MBV	-0.998	-2.544*	-0.0658	-3.640**	-1.179	-2.161	-0.0640	-3.726**
	(-1.38)	(-1.87)	(-1.60)	(-2.45)	(-1.43)	(-1.57)	(-1.63)	(-2.36)
Leverage	-0.400	-1.000	0.0144	0.0260	-0.548	-1.085	0.0103	-0.120
	(-1.12)	(-1.33)	(0.65)	(0.04)	(-1.40)	(-1.48)	(0.44)	(-0.16)

Table 6.14 Continued

Price volatility	0.00772	0.0252	0.000926*	0.0104	0.0111	0.0327*	0.00113**	0.0156
	(0.77)	(1.39)	(1.80)	(0.73)	(1.00)	(1.81)	(2.23)	(1.08)
Post 2007					0.213	0.710*	0.0257***	0.912***
					(0.96)	(1.72)	(3.14)	(2.65)
Post 2010					0.162	-0.175	0.00512	0.0776
					(0.68)	(-0.43)	(0.49)	(0.23)
Post 2011					0.0990	0.450	-0.0158*	-0.458
					(0.38)	(0.91)	(-1.65)	(-1.56)
Post_2013					-0.326	-0.585	0.0130***	0.393
					(-1.31)	(-1.36)	(2.58)	(1.60)
Year dummies	Yes	Yes	Yes	Yes	No	No	No	No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-8.441***	-7.505***	-0.181***	-6.905***	-8.595***	-6.619**	-0.177***	-7.647***
	(-5.85)	(-3.02)	(-2.67)	(-3.55)	(-5.91)	(-2.35)	(-2.64)	(-3.67)
N	1024	1024	1240	1240	1024	1024	1240	1240
R2/Pseudo R2	0.188	0.140	0.112	0.113	0.161	0.125	0.089	0.091

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Dissent >10% is an indicator of 1 if shareholders' dissent is greater than 10%, 0 otherwise. Women is proportion of women from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Post 2007 to account for the impact of financial crisis. Post 2010 to account for the impact of Stewardship Code. Post 2011 to account for the impact of Davies Report (2011). Post 2013 account for the impact of say-on-pay mandatory and binding voting. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.15 Two or More Women and Foreign Directors on the Remuneration Committee and the Impact on Shareholders' Dissent Voting for the Post-Match Sample

	Model (1) OLS Log dissent	Model (2) Logit Dissent>10	Model (3) OLS Log dissent	Model (4) Logit Dissent>10	Model (5) OLS Log dissent	Model (6) Logit Dissent>10	Model (7) OLS Log dissent	Model (8) Logit Dissent>10 %
Main variables								
Women = 1	-0.130	-0.134						
	(-1.01)	(-0.62)						
Foreign directors = 1			-0.164	0.0440				
			(-1.63)	(0.22)				
Women ≥ 2					-0.485***	-0.789***		
					(-3.05)	(-2.90)		
Foreign directors ≥ 2							0.203*	0.421*
							(1.90)	(1.73)
Control variables								
Log total CEO pay	0.531***	0.554***	0.444***	0.415*	0.555***	0.591***	0.434***	0.393
	(6.17)	(3.48)	(4.76)	(1.66)	(6.62)	(3.63)	(4.65)	(1.60)
Institutional ownership	0.468	0.983	-0.115	0.110	0.434	0.927	-0.109	0.110
	(1.21)	(1.53)	(-0.37)	(0.18)	(1.12)	(1.47)	(-0.35)	(0.18)
Board size	0.0649*	0.0724	0.0266	0.0240	0.0565	0.0593	0.0342	0.0317
	(1.69)	(1.13)	(0.82)	(0.29)	(1.43)	(0.89)	(1.06)	(0.37)
Remuneration committee size	0.327	1.188	-0.0794	-0.280	0.189	0.955	-0.0909	-0.450
	(0.43)	(0.92)	(-0.14)	(-0.22)	(0.25)	(0.73)	(-0.16)	(-0.35)
Board independence	0.0663	0.144	0.00924	0.108	0.116*	0.225*	-0.00344	0.0745
	(1.23)	(1.29)	(0.18)	(0.91)	(1.90)	(1.84)	(-0.07)	(0.60)
Remuneration committee independence	0.385	0.395	0.961**	2.695**	0.558	0.654	0.937**	2.661***
	(0.70)	(0.34)	(2.47)	(2.54)	(0.99)	(0.55)	(2.44)	(2.61)
CEO duality	0.536***	1.334***	0.318*	0.665	0.581***	1.419***	0.287	0.621
	(2.96)	(3.96)	(1.68)	(1.47)	(3.20)	(4.16)	(1.54)	(1.41)
Log total sales	-0.0437	-0.254**	0.0143	-0.118	-0.0352	-0.244**	0.00691	-0.136
	(-0.67)	(-2.15)	(0.27)	(-1.17)	(-0.53)	(-2.00)	(0.13)	(-1.37)
Stock return	-0.134	-0.211	-0.0669	-0.107	-0.145	-0.233	-0.0801	-0.121
	(-0.77)	(-0.75)	(-0.50)	(-0.34)	(-0.84)	(-0.84)	(-0.60)	(-0.39)
ROA	-1.381*	-2.353*	-1.452**	-3.495**	-1.414*	-2.532**	-1.487**	-3.665**
	(-1.83)	(-1.87)	(-2.04)	(-2.22)	(-1.91)	(-2.00)	(-2.08)	(-2.33)

Table 6.15 Continued

MBV	-0.00933	-0.00426	0.00581	0.0231*	-0.00917	-0.00413	0.00545	0.0218*
	(-1.25)	(-0.66)	(1.37)	(1.88)	(-1.26)	(-0.65)	(1.34)	(1.79)
Leverage	-0.589*	-0.948	0.522	-0.110	-0.539	-0.854	0.550	-0.152
	(-1.65)	(-1.35)	(1.40)	(-0.14)	(-1.50)	(-1.20)	(1.47)	(-0.20)
Price volatility	0.0144	0.0388**	0.00460	0.0123	0.0158	0.0420**	0.00568	0.0145
	(1.32)	(2.40)	(0.59)	(0.87)	(1.47)	(2.56)	(0.73)	(1.02)
Post 2007	0.0361	0.577	0.243	0.854**	0.0237	0.561	0.266*	0.890**
	(0.20)	(1.60)	(1.62)	(2.42)	(0.13)	(1.56)	(1.78)	(2.54)
Post 2010	0.398*	-0.0232	0.181	0.0960	0.404*	-0.0188	0.172	0.0953
	(1.73)	(-0.05)	(1.30)	(0.28)	(1.74)	(-0.04)	(1.23)	(0.28)
Post 2011	0.00791	0.509			0.0460	0.568		
	(0.03)	(1.06)			(0.18)	(1.17)		
Post 2013	-0.358	-0.739**	-0.263*	-0.413	-0.310	-0.682*	-0.287**	-0.450
	(-1.54)	(-2.02)	(-1.89)	(-1.39)	(-1.33)	(-1.89)	(-2.06)	(-1.53)
Year dummies	No	No	No	No	No	No	No	No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-9.272***	-6.001***	-9.201***	-7.941***	-9.968***	-6.898***	-9.123***	-7.365***
	(-8.30)	(-2.88)	(-10.23)	(-3.69)	(-7.66)	(-2.90)	(-9.91)	(-3.43)
N	1564	1564	1235	1240	1586	1586	1235	1240
R2/Pseudo R2	0.146	0.117	0.176	0.086	0.145	0.105	0.177	0.089

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Women = 1 is an indicator of 1 of a remuneration committee has one woman. Women ≥ 2 is an indicator of 1 of a remuneration committee has two or more women. Foreign director = 1 is an indicator of 1 of a remuneration committee has one foreign director. Foreign directors ≥ 2 is an indicator of 1 of a remuneration committee has two or more foreign directors. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Post 2007 to account for the impact of financial crisis. Post 2010 to account for the impact of Stewardship Code. Post 2011 to account for the impact of Davies Report (2011). Post 2013 account for the impact of say-on-pay mandatory and binding voting. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.16 Impact of Women and Foreign Directors on the Remuneration Committee on CEO Pay for the Post-Match Sample

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
Women directors	0.0957	-0.302**	1.454**	-0.471**				
	(0.73)	(-2.96)	(2.93)	(-2.65)				
Foreign directors					0.176**	0.0473	0.279*	0.229**
					(2.02)	(0.75)	(1.71)	(1.97)
Control variables								
Institutional ownership	-0.396*	-0.0960	-0.648	-0.144	-0.362***	-0.288***	-0.620***	-0.438**
	(-2.39)	(-0.75)	(-1.47)	(-0.66)	(-2.79)	(-2.70)	(-3.03)	(-2.45)
Board size	0.0541***	0.0348**	0.0346	0.0652**	0.0631***	0.0450***	0.0746***	0.0374***
	(3.51)	(2.78)	(0.79)	(3.15)	(5.34)	(5.92)	(4.50)	(2.72)
Remuneration committee size	0.0152	0.00489	0.0586	0.0127	0.0480**	0.0243*	0.0392	-0.000683
	(0.63)	(0.28)	(0.76)	(0.41)	(2.19)	(1.79)	(1.43)	(-0.03)
Board independence	0.103	0.217	-1.303*	0.130	0.486	0.322**	0.938***	0.287
	(0.43)	(1.19)	(-1.99)	(0.37)	(1.58)	(2.02)	(2.64)	(0.94)
Remuneration committee independence	-0.387	-0.281	-0.322	-0.473	-0.619***	-0.359***	-0.437*	-0.376
	(-1.69)	(-1.32)	(-0.74)	(-1.30)	(-4.21)	(-3.17)	(-1.84)	(-1.37)
CEO duality	-0.306**	0.122	-1.532***	0.201	-0.475***	-0.102*	-0.535***	-0.271**
	(-2.94)	(1.45)	(-4.69)	(1.41)	(-6.41)	(-1.67)	(-4.74)	(-2.34)
Log CEO tenure	0.0430	0.0965***	-0.130	0.0323	0.0664**	0.137***	0.0644*	0.138***
	(1.54)	(4.40)	(-1.88)	(0.83)	(2.52)	(6.67)	(1.92)	(4.50)
Log total sales	0.213***	0.148***	0.308***	0.147***	0.208***	0.152***	0.299***	0.204***
	(8.74)	(7.81)	(4.90)	(4.49)	(11.60)	(9.99)	(10.20)	(7.41)
Stock return	0.325***	0.179***	0.449**	0.257***	0.295***	0.111**	0.433***	0.239***
	(4.84)	(3.57)	(2.98)	(3.80)	(4.80)	(2.06)	(4.74)	(2.66)
ROA	1.099***	0.488*	2.692**	0.326	0.369	0.301	-0.338	0.291
	(3.47)	(2.06)	(2.92)	(0.79)	(1.16)	(1.06)	(-0.77)	(0.64)
MBV	0.00184	-0.00141	0.00413	-0.00440	0.000751	0.000469	-0.000166	0.00122

Table 6.16 Continued

	(1.38)	(-1.15)	(1.26)	(-1.47)	(0.65)	(0.35)	(-0.09)	(0.54)
Leverage	-0.168	-0.254	0.549	-0.725**	0.443***	0.395***	0.263	0.399*
	(-0.91)	(-1.84)	(1.36)	(-2.60)	(3.07)	(3.48)	(1.28)	(1.91)
Price volatility	-0.0147***	-0.0130***	-0.00965	-0.0231***	-0.00485	-0.00128	-0.00588	-0.00244
	(-4.68)	(-4.93)	(-0.86)	(-4.18)	(-1.63)	(-0.50)	(-1.00)	(-0.62)
Foreign sales	0.00397***	0.00279***	0.00986***	0.00465***	0.00133*	0.00250***	0.00226**	0.00357***
	(5.08)	(4.89)	(3.65)	(3.96)	(1.84)	(4.87)	(2.15)	(3.75)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	4.729***	4.710***	2.272	3.469***	3.489***	3.600***	0.805	2.884***
	(8.30)	(10.69)	(1.44)	(5.28)	(10.02)	(11.78)	(1.28)	(5.40)
N	942	942	853	730	1437	1437	1307	1144
R^2	0.581	0.525	0.483	0.438	0.606	0.578	0.500	0.500

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women directors is proportion of women directors from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.17 Two or More Women Directors on the Remuneration Committee and Impact on CEO Pay for the Post-Match Sample

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
Women = 1	0.117***	0.00609	0.167*	-0.0117				
	(2.66)	(0.17)	(1.73)	(-0.18)				
Women ≥ 2					0.0208	-0.0731***	0.172**	-0.0982**
					(0.63)	(-2.71)	(2.49)	(-2.54)
Control variables								
Institutional ownership	-0.261**	-0.0482	-0.599***	-0.298*	-0.260**	-0.0507	-0.596***	-0.310*
	(-2.22)	(-0.40)	(-2.72)	(-1.86)	(-2.21)	(-0.42)	(-2.70)	(-1.95)
Board size	0.0843***	0.0524***	0.0776**	0.0498***	0.0828***	0.0531***	0.0739**	0.0509***
	(7.71)	(6.33)	(2.56)	(4.48)	(7.59)	(6.53)	(2.48)	(4.64)
Remuneration committee size	0.0181	0.0304**	0.0227	0.0197	0.0254	0.0278**	0.0402	0.0154
	(0.97)	(2.34)	(0.55)	(0.83)	(1.35)	(2.16)	(1.00)	(0.68)
Board independence	1.245***	0.840***	1.410***	1.440***	1.225***	0.840***	1.378***	1.440***
	(6.21)	(6.13)	(3.74)	(6.99)	(6.08)	(6.05)	(3.64)	(7.01)
Remuneration committee independence	-0.411***	-0.271**	-0.605**	-0.332*	-0.403***	-0.260**	-0.608**	-0.309*
	(-2.98)	(-2.54)	(-2.20)	(-1.79)	(-2.95)	(-2.44)	(-2.24)	(-1.65)
CEO duality	-0.310***	-0.0954*	-0.596**	0.0670	-0.302***	-0.0994*	-0.565**	0.0606
	(-4.05)	(-1.75)	(-2.18)	(0.79)	(-3.93)	(-1.81)	(-2.11)	(0.72)
Log total sales	0.171***	0.149***	0.233***	0.191***	0.174***	0.146***	0.242***	0.186***
	(8.37)	(9.52)	(5.92)	(9.31)	(8.55)	(9.11)	(6.25)	(9.21)
Stock return	0.403***	0.262***	0.544***	0.403***	0.406***	0.261***	0.556***	0.401***
	(7.74)	(4.97)	(5.35)	(6.28)	(7.82)	(4.92)	(5.53)	(6.31)
ROA	1.102***	0.655***	1.387**	0.843**	1.094***	0.657***	1.368**	0.851**
	(3.39)	(2.93)	(2.31)	(2.45)	(3.36)	(2.92)	(2.28)	(2.45)
MBV	0.00359*	0.000664	0.00590*	0.00268*	0.00359*	0.000647	0.00596*	0.00268*
	(1.84)	(0.73)	(1.69)	(1.74)	(1.85)	(0.72)	(1.72)	(1.76)

Table 6.17 Continued

Leverage	-0.0789	-0.165*	0.222	-0.356**	-0.0601	-0.168*	0.250	-0.362**
	(-0.65)	(-1.77)	(0.89)	(-2.17)	(-0.49)	(-1.78)	(1.00)	(-2.20)
Price volatility	-0.0125***	-0.0106***	-0.00982	-0.0139***	-0.0124***	-0.0109***	-0.00922	-0.0143***
	(-4.47)	(-5.09)	(-1.35)	(-4.07)	(-4.41)	(-5.20)	(-1.27)	(-4.19)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.933***	3.816***	2.169**	2.835***	3.862***	3.897***	1.890**	2.955***
	(11.92)	(11.40)	(2.33)	(6.01)	(11.74)	(11.27)	(2.05)	(6.26)
N	1975	1975	1756	1586	1975	1975	1756	1586
R^2	0.495	0.439	0.327	0.423	0.493	0.442	0.330	0.426

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women = 1 is an indicator of 1 of a remuneration committee has one woman. Women ≥ 2 is an indicator of 1 of a remuneration committee has two or more women. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.18 Two or More Foreign Directors on the Remuneration Committee and Impact on CEO Pay for the Post-Match Sample

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
Foreign directors = 1	0.0457	-0.0129	-0.0756	0.0246				
	(0.45)	(-0.17)	(-0.41)	(0.15)				
Foreign directors $\geq$ 2					0.179*	0.230***	0.163	0.359***
					(1.80)	(3.14)	(0.97)	(2.72)
Control variables								
Institutional ownership	0.161	-0.0717	-0.392	-0.574	0.149	-0.0858	-0.415	-0.583*
	(0.52)	(-0.36)	(-0.84)	(-1.65)	(0.49)	(-0.44)	(-0.89)	(-1.71)
Board size	0.113***	0.0561***	0.0558	0.0774***	0.110***	0.0537***	0.0556	0.0769***
	(3.71)	(3.14)	(1.06)	(2.74)	(3.61)	(3.08)	(1.09)	(2.68)
Remuneration committee size	-0.0496	-0.0229	0.00626	-0.101	-0.0598	-0.0356	-0.00599	-0.119
	(-0.98)	(-0.65)	(0.08)	(-1.32)	(-1.16)	(-1.01)	(-0.07)	(-1.58)
Board independence	0.801*	0.148	1.218	1.192*	0.738*	0.0705	1.180	1.139*
	(1.80)	(0.52)	(1.43)	(1.76)	(1.68)	(0.25)	(1.42)	(1.72)
Remuneration committee independence	-0.314	-0.417	0.172	-1.092**	-0.334	-0.428	0.161	-1.145**
	(-0.73)	(-1.40)	(0.24)	(-2.06)	(-0.78)	(-1.48)	(0.22)	(-2.25)
CEO duality	-0.241*	-0.0657	0.00382	-0.208	-0.243*	-0.0631	0.00338	-0.208
	(-1.68)	(-0.64)	(0.01)	(-0.83)	(-1.68)	(-0.64)	(0.01)	(-0.83)
Log CEO tenure	0.0287	0.0731**	0.00558	0.179***	0.0305	0.0727**	0.00454	0.179***
	(0.69)	(2.28)	(0.08)	(2.94)	(0.73)	(2.35)	(0.07)	(3.00)
Log total sales	0.206***	0.145***	0.284***	0.0535	0.199***	0.140***	0.282***	0.0462
	(4.02)	(4.32)	(3.25)	(0.80)	(3.99)	(4.29)	(3.18)	(0.72)
Stock return	0.352***	0.180**	0.480***	0.347***	0.344***	0.170**	0.471***	0.336***
	(3.91)	(2.13)	(3.34)	(2.66)	(3.76)	(2.07)	(3.20)	(2.71)
ROA	0.983	0.871*	0.883	1.569**	0.880	0.765	0.832	1.414*
	(1.63)	(1.77)	(0.98)	(2.15)	(1.47)	(1.63)	(0.96)	(1.96)
MBV	-0.00247	-0.000686	-0.00276	0.00549	-0.00198	-0.0000652	-0.00244	0.00644
	(-0.99)	(-0.32)	(-0.44)	(1.24)	(-0.78)	(-0.03)	(-0.38)	(1.38)

Table 6.18 Continued

Leverage	0.0568	0.228	-0.350	-0.00160	0.0263	0.200	-0.380	-0.110
	(0.19)	(0.97)	(-0.70)	(-0.00)	(0.09)	(0.86)	(-0.76)	(-0.29)
Price volatility	-0.00602	-0.000150	-0.0115	0.0134*	-0.00721	-0.00108	-0.0118	0.0113
	(-0.97)	(-0.03)	(-1.31)	(1.84)	(-1.18)	(-0.23)	(-1.41)	(1.56)
Foreign sales	0.00148	0.00263**	0.00271	0.00123	0.000981	0.00206**	0.00247	0.000441
	(0.85)	(2.42)	(0.92)	(0.55)	(0.58)	(1.98)	(0.83)	(0.20)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.933***	3.816***	2.169**	2.835***	3.862***	3.897***	1.890**	2.955***
	(11.92)	(11.40)	(2.33)	(6.01)	(11.74)	(11.27)	(2.05)	(6.26)
N	1975	1975	1756	1586	1975	1975	1756	1586
R^2	0.495	0.439	0.327	0.423	0.493	0.442	0.330	0.426

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Foreign director = 1 is an indicator of 1 of a remuneration committee has one foreign director. Foreign directors ≥ 2 is an indicator of 1 of a remuneration committee has two or more foreign directors. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.19 Impact of Women and Foreign Directors on the Remuneration Committee on CEO Pay using Two-Steps GMM

	Model (1) GMM Log total CEO pay	Model (2) GMM Log CEO cash pay	Model (3) GMM Log CEO equity pay	Model (4) GMM Log CEO bonus pay	Model (5) GMM Log total CEO pay	Model (6) GMM Log CEO cash pay	Model (7) GMM Log CEO equity pay	Model (8) GMM Log CEO bonus pay
Lagged dependent variables								
Log total CEO pay t-1	0.0963				0.405*			
	(1.90)				(1.67)			
Log CEO cash pay t-1		0.325				0.338**		
		(1.93)				(2.22)		
Log CEO equity pay t-1			0.151				-0.350***	
			(0.67)				(-9.18)	
Log CEO bonus pay t-1				0.457**				0.422***
				(3.12)				(2.84)
Main independent variables								
Women directors	0.172	-0.0956	0.282*	-0.239*				
	(1.61)	(-1.32)	(1.68)	(-1.89)				
Foreign directors					0.193**	0.110*	0.361*	0.316***
					(2.36)	(1.66)	(1.84)	(2.94)
Control variables								
Institutional ownership	-0.0879	-0.0557	-0.00298	-0.204	-0.0957	-0.0452	-0.460*	-0.242*
	(-0.81)	(-0.77)	(-0.02)	(-1.54)	(-0.97)	(-0.57)	(-1.65)	(-1.79)
Board size	0.0649***	0.0213*	0.0447*	0.0283	0.0335**	0.0208**	0.0695***	0.0275*
	(6.17)	(2.53)	(2.53)	(1.68)	(2.49)	(2.43)	(2.91)	(1.67)
Remuneration committee size	-0.0194	0.00794	0.0151	-0.00777	-0.00592	0.00751	-0.00592	-0.0266
	(-0.85)	(0.59)	(0.54)	(-0.35)	(-0.28)	(0.52)	(-0.12)	(-1.22)
Board independence	0.700**	0.291	0.769*	0.278	0.408	0.170	1.394**	0.166
	(3.21)	(1.93)	(2.03)	(1.15)	(1.42)	(1.15)	(2.42)	(0.64)
Remuneration committee independence	-0.531*	-0.157	-0.235	-0.412	-0.224	-0.162	-0.833	-0.618*
	(-2.43)	(-1.13)	(-0.70)	(-1.17)	(-1.04)	(-1.12)	(-1.49)	(-1.77)
CEO duality	-0.282***	-0.0735	-0.183	-0.0156	-0.285***	-0.0906	-0.300	-0.0322
	(-3.93)	(-1.36)	(-1.58)	(-0.17)	(-3.31)	(-1.61)	(-1.64)	(-0.37)
Log CEO tenure	0.0590***	0.124***	0.0311	0.121***	0.0619***	0.112***	0.0551*	0.112***
	(3.40)	(8.00)	(1.31)	(4.94)	(3.41)	(7.22)	(1.80)	(4.55)
Log total sales	0.212***	0.124***	0.271**	0.0976**	0.128*	0.122***	0.442***	0.0880**
	(8.61)	(3.58)	(3.28)	(2.62)	(1.88)	(3.75)	(9.30)	(2.40)

Table 6.19 Continued

Stock return	0.314***	0.153***	0.577***	0.379***	0.392***	0.159***	0.487***	0.364***
	(12.17)	(3.80)	(8.42)	(6.81)	(7.94)	(4.48)	(8.02)	(6.57)
ROA	0.190	0.303	0.00646	0.0289	0.195	0.325*	0.971	0.207
	(0.79)	(1.62)	(0.01)	(0.08)	(0.70)	(1.78)	(1.63)	(0.57)
MBV	0.00132	0.000571	0.00301	0.00138	0.00150	0.000453	0.00212	0.00144
	(1.53)	(1.00)	(1.64)	(1.01)	(1.61)	(0.71)	(1.22)	(0.96)
Leverage	0.0420	0.0812	0.0215	0.0144	0.106	0.112	0.00888	-0.0115
	(0.31)	(0.86)	(0.11)	(0.09)	(0.93)	(1.11)	(0.03)	(-0.07)
Price volatility	-0.00904***	-0.00154	-0.0108*	-0.00224	-0.00543**	-0.00186	-0.0140	-0.00238
	(-3.31)	(-0.73)	(-2.47)	(-0.76)	(-2.16)	(-0.88)	(-1.60)	(-0.71)
Foreign sales	0.00153*	0.00130**	0.00204*	0.000749	0.000725	0.00106**	0.00243	-0.000022
	(2.40)	(2.81)	(2.02)	(0.98)	(1.23)	(2.30)	(1.61)	(-0.03)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.424***	2.457***	1.363*	2.093**	2.382***	2.426***	2.536***	2.762***
	(7.73)	(3.44)	(2.01)	(2.67)	(2.83)	(3.62)	(2.58)	(3.32)
N	1973	1974	1648	1435	1973	1974	1648	1435
chi2	1301.3	1379.2	796.5	814.0	1789.9	1267.3	533.3	816.4

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women directors is proportion of women directors from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.20 Two or More Women Directors on the Remuneration Committee and Impact on CEO Pay using Two-Steps GMM

	Model (1) GMM Log total CEO pay	Model (2) GMM Log CEO cash pay	Model (3) GMM Log CEO equity pay	Model (4) GMM Log CEO bonus pay	Model (5) GMM Log total CEO pay	Model (6) GMM Log CEO cash pay	Model (7) GMM Log CEO equity pay	Model (8) GMM Log CEO bonus pay
Lagged dependent variables								
Log total CEO pay t-1	0.0826				0.111*			
	(1.36)				(1.73)			
Log CEO cash pay t-1		0.148***				0.135***		
		(2.91)				(2.99)		
Log CEO equity pay t-1			0.0640				0.0581	
			(0.99)				(0.73)	
Log CEO bonus pay t-1				0.283***				0.293***
				(4.63)				(4.42)
Main independent variables								
Women = 1	0.117**	0.0875**	0.138**	0.100				
	(2.15)	(2.10)	(2.28)	(1.20)				
Women ≥ 2					-0.0270	-0.0722***	0.0156	-0.0743*
					(-0.83)	(-2.87)	(0.30)	(-1.88)
Control variables								
Institutional ownership	-0.145	-0.0746	-0.132	-0.178	-0.185	-0.118	-0.120	-0.211
	(-1.10)	(-0.78)	(-0.63)	(-1.26)	(-1.49)	(-1.34)	(-0.57)	(-1.41)
Board size	0.0620***	0.0280**	0.0487***	0.0334*	0.0629***	0.0257**	0.0508***	0.0323
	(4.67)	(2.40)	(2.91)	(1.82)	(4.70)	(2.29)	(3.04)	(1.64)
Remuneration committee size	0.0134	0.00824	0.00906	-0.0222	0.00189	0.0240	0.0250	-0.00696
	(0.55)	(0.46)	(0.29)	(-0.83)	(0.08)	(1.40)	(0.74)	(-0.26)
Board independence	0.618**	0.257*	1.067***	0.485*	0.923***	0.378**	1.004**	0.443
	(2.56)	(1.66)	(2.82)	(1.74)	(3.68)	(2.40)	(2.29)	(1.64)
Remuneration committee independence	-0.371	-0.222	-0.434	-0.499	-0.555**	-0.224	-0.192	-0.429
	(-1.60)	(-1.16)	(-1.11)	(-1.58)	(-2.39)	(-1.17)	(-0.47)	(-1.20)
CEO duality	-0.332***	-0.0731	-0.217*	-0.0369	-0.288***	-0.0976	-0.217	0.00890
	(-4.00)	(-1.03)	(-1.70)	(-0.32)	(-3.65)	(-1.52)	(-1.55)	(0.08)
Log CEO tenure	0.0623***	0.113***	0.0351	0.117***	0.0617***	0.112***	0.0238	0.113***
	(3.46)	(6.66)	(1.62)	(5.06)	(3.29)	(6.90)	(0.97)	(4.23)
Log total sales	0.196***	0.144***	0.295***	0.138***	0.182***	0.141***	0.309***	0.141***
	(8.15)	(7.48)	(7.70)	(4.16)	(7.12)	(7.28)	(6.96)	(4.03)

Table 6.20 Continued

Stock return	0.369***	0.135***	0.589***	0.334***	0.347***	0.140***	0.552***	0.335***
	0.341***	0.126***	0.591***	0.330***	0.342***	0.121***	0.565***	0.284***
ROA	(8.17)	(3.26)	(13.79)	(4.56)	(9.97)	(3.99)	(11.31)	(4.23)
	0.251	0.410**	0.362	0.450	0.157	0.404**	0.183	0.393
MBV	(0.84)	(2.26)	(0.84)	(1.41)	(0.53)	(2.38)	(0.39)	(1.27)
	0.00164*	0.000407	0.00209	0.00154	0.00209*	0.000736	0.00210	0.00177
Leverage	(1.68)	(0.64)	(1.57)	(1.32)	(1.96)	(0.97)	(1.53)	(1.42)
	-0.0127	-0.0449	-0.0377	-0.101	-0.0175	-0.0700	0.0541	-0.128
Price volatility	(-0.09)	(-0.39)	(-0.17)	(-0.59)	(-0.11)	(-0.62)	(0.25)	(-0.69)
	-0.00954***	-0.00463*	-0.0138**	-0.00651*	-0.0113***	-0.00416*	-0.0111*	-0.00403
Foreign sales	(-2.87)	(-1.92)	(-2.52)	(-1.76)	(-3.39)	(-1.76)	(-1.95)	(-1.10)
	0.00193***	0.00177***	0.00284***	0.00163*	0.00163**	0.00170***	0.00253**	0.00188*
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.622***	3.405***	1.363*	2.303***	3.749***	3.507***	0.839	2.087***
	(7.79)	(8.66)	(2.01)	(3.59)	(7.79)	(9.19)	(1.15)	(3.02)
N	2086	2087	1713	1514	2086	2087	1713	1514
chi2	952.44	909.15	44224	627.17	996.61	874.41	503.88	525.65

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Woman = 1 is an indicator of 1 of a remuneration committee has one woman director. Women ≥ 2 is an indicator of 1 of a remuneration committee has two or more women directors. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.21 Two or More Foreign Directors on the Remuneration Committee and Impact on CEO Pay using Two-Steps GMM

	Model (1) GMM Log total CEO pay	Model (2) GMM Log CEO cash pay	Model (3) GMM Log CEO equity pay	Model (4) GMM Log CEO bonus pay	Model (5) GMM Log total CEO pay	Model (6) GMM Log CEO cash pay	Model (7) GMM Log CEO equity pay	Model (8) GMM Log CEO bonus pay
Lagged dependent variables								
Log total CEO pay t-1	0.436***				0.509***			
	(3.51)				(3.59)			
Log CEO cash pay t-1		0.614***				0.126***		
		(5.74)				(3.94)		
Log CEO equity pay t-1			0.0151				0.127	
			(0.16)				(1.03)	
Log CEO bonus pay t-1				0.486***				0.101
				(4.51)				(1.02)
Main independent variables								
Foreign directors = 1	0.0364	-0.00620	0.0272	0.0175				
	(1.08)	(-0.25)	(0.54)	(0.42)				
Foreign directors $\geq$ 2					0.115**	0.0791**	0.137**	0.291***
					(2.13)	(2.03)	(1.99)	(3.89)
Control variables								
Institutional ownership	-0.156	0.425***	-0.450	-0.341	-0.199	-0.171	-0.664**	-1.017***
	(-0.58)	(2.67)	(-1.51)	(-1.09)	(-0.89)	(-1.18)	(-2.26)	(-3.56)
Board size	0.0356**	-0.00212	0.0596***	0.0186	0.0331**	0.0281***	0.0657***	0.0490***
	(2.59)	(-0.25)	(3.58)	(1.22)	(2.52)	(3.30)	(3.68)	(2.91)
Remuneration committee size	0.00293	0.0501***	0.0112	-0.00951	-0.0176	0.000172	-0.0403	-0.0612**
	(0.11)	(2.99)	(0.32)	(-0.35)	(-0.64)	(0.01)	(-1.09)	(-2.02)
Board independence	0.353	0.108	0.772	0.192	0.119	0.389***	0.797	0.689*
	(1.19)	(0.45)	(1.53)	(0.57)	(0.41)	(2.80)	(1.62)	(1.85)
Remuneration committee independence	-0.226	0.763**	-0.492	-0.393	-0.0277	-0.446*	-1.105*	-1.774***
	(-0.51)	(2.21)	(-0.87)	(-0.75)	(-0.07)	(-1.75)	(-1.79)	(-3.52)
CEO duality	-0.196**	-0.0370	-0.192	-0.0331	-0.205**	-0.131**	-0.232*	-0.109
	(-2.13)	(-0.67)	(-1.41)	(-0.38)	(-2.22)	(-2.28)	(-1.67)	(-0.91)
Log CEO tenure	0.0485**	0.130***	0.0180	0.117***	0.0424*	0.105***	-0.0127	0.0945***
	(2.09)	(7.38)	(0.59)	(3.80)	(1.91)	(6.44)	(-0.46)	(2.73)
Log total sales	0.129	0.219***	0.265***	0.0694	0.0793	0.100**	0.141	-0.0790
	(1.56)	(4.22)	(2.73)	(0.83)	(1.22)	(2.42)	(1.51)	(-0.99)

Table 6.21 Continued

Stock return	0.355***	0.181***	0.558***	0.353***	0.323***	0.130***	0.563***	0.266***
	(7.44)	(4.43)	(9.98)	(6.07)	(6.17)	(4.60)	(9.15)	(4.93)
ROA	0.0395	0.635***	0.0493	0.0736	-0.122	0.369**	-0.359	-0.174
	(0.11)	(2.82)	(0.09)	(0.17)	(-0.39)	(2.14)	(-0.73)	(-0.37)
MBV	0.000971	0.0000535	0.00298*	0.00169	0.00116	0.000299	0.00240	0.00128
	(0.80)	(0.09)	(1.81)	(1.37)	(0.97)	(0.53)	(1.39)	(1.03)
Leverage	0.0550	0.0866	0.0548	-0.0304	0.0968	-0.0305	-0.0544	-0.0945
	(0.49)	(1.04)	(0.29)	(-0.19)	(0.76)	(-0.29)	(-0.27)	(-0.41)
Price volatility	-0.00477	0.0102**	-0.0158**	-0.00401	-0.00351	-0.00743**	-0.0191***	-0.0196***
	(-0.76)	(2.47)	(-2.40)	(-0.55)	(-0.62)	(-2.12)	(-2.70)	(-2.60)
Foreign sales	0.00121**	0.00124***	0.00234**	0.00185***	0.000427	0.00145***	0.00131	0.000909
	(2.18)	(3.30)	(2.55)	(2.70)	(0.73)	(2.94)	(1.54)	(0.93)
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.424***	2.457***	1.363*	2.093**	2.382***	2.426***	2.536***	2.762***
	(7.73)	(3.44)	(2.01)	(2.67)	(2.83)	(3.62)	(2.58)	(3.32)
N	2086	2087	1713	1514	2086	2087	1713	1514
chi2	1301.3	1379.2	796.5	814.0	1789.9	1267.3	533.3	816.4

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Foreign director = 1 is an indicator of 1 of a remuneration committee has one foreign director. Foreign directors ≥ 2 is an indicator of 1 of a remuneration committee has two or more foreign directors. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

6.6.7 Additional tests

This study employs different additional tests on the relationship between presence of women and foreign directors on remuneration committees and, say-on-pay and CEO pay. This sub-section discusses three additional tests. The first test investigates the reverse causality problem, whereas the second test examines the impact of women and foreign directors on remuneration committees on say-on-pay and CEO pay pre- and post the 2007 financial crisis. The third test addresses the impact of British and non-British women on say-on-pay and CEO pay.

i. Does shareholder dissent voting and CEO pay affect the appointment of women and foreign directors on remuneration committees? Reverse causality test

The main assumption of this study is that women are effective monitors and hence shareholders are more likely to be satisfied with remuneration package if there are women directors on the remuneration committee. Similarly, this study assumes that foreign directors may be less effective monitors and may lead higher CEO remuneration and hence shareholders are more likely to vote against remuneration package. An alternative explanation would be that women tend to join (or may self-select into) the remuneration committees of firms that receive lower dissent voting and that foreign directors tend to join (or may self-select into) the remuneration committees that receive higher dissent voting. Therefore, this study runs an addition test to check reverse causality.

Table 6.22 presents results of the additional test. In model (1), the dependent variable is *women appointment*, whereas in models (2), the dependent variable is *foreign directors appointment*. Results in table 6.22 show no evidence that women and foreign directors tend to join the remuneration committees of firms that receive lower or higher dissent voting or firms that distribute higher or lower CEO remuneration. Thus, the reverse causality problem is less

of concern in this study. Results in Table 6.22 also reveal the main factors that lead to higher appointment of women and foreign directors on remuneration committees are higher with firms that have higher percentages of women and foreign directors on their boards, firms that have higher percentage of institutional ownership and firms that have larger remuneration committees.

ii. Impact of women and foreign directors on say-on-pay dissent voting and CEO pay: Pre- and post the 2007 financial crisis

After the financial crisis of 2007, the UK reformed its corporate governance framework, setting new polices for gender diversity (Davies Report, 2011), engaging shareholders in their corporate boards (Stewardship Code, 2010) and establishing external board evaluation (Walker Review, 2009). Accordingly, this section examines the impact of women and foreign directors on remuneration committees regarding CEO pay and say-on-pay dissent voting before and after the recent financial crisis.

Table 6.23 shows the impact of women and foreign directors on remuneration committees on say-on-pay dissent voting before and after the 2007 financial crisis. Although results remain unchanged under the OLS model but not the logit model, prior to 2007, the presence of women on remuneration committees exerted a more significant negative impact on shareholders' dissent voting than after the 2007 financial crisis, indicating that the Davies Report (2011) reform was useful and effective. The results reveal that the Davies Report (2011) has increased the representation of women on UK corporate boards (see section 6.3 of this chapter). In contrast, the presence of foreign directors on remuneration committees reveals a more significant negative effect on say-on-pay dissent voting before the 2007 financial crisis.

Tables 6.24 and 6.25 present the findings of whether women and foreign directors have an influence on CEO remuneration, and it shows that, overall, women directors on remuneration committees have no impact on CEO remuneration, whereas foreign directors appear to have a significant positive influence on CEO remuneration before and after the 2007 financial crisis (particularly with equity and bonus remuneration).

iii. Impact of British and non-British women on say-on-pay dissent voting and CEO pay

The second additional test investigates the impact of British and non-British women on remuneration committees on say-on-pay dissent voting and CEO pay. Similar to foreign directors, non-British women may also are less effective monitor, therefore they may lead to higher dissent voting and CEO pay.

Table 6.26 presents results of the effect of British and non-British women on say-on-pay dissent voting. It is obvious that only British women lead to less shareholder dissent voting, whereas non-British women are either have no impact on say-on-pay dissent voting under OLS model or they may lead to higher shareholder dissent voting under logit model. Table 6.27 shows results of the relationship between British and non-British women on remuneration committees and CEO pay. Firms with more British women on their remuneration committees tend to have lower CEO cash remuneration and higher CEO equity remuneration; however, firms with more non-British women on their remuneration committees tend to have no influence on CEO pay.

Table 6.22 Impact of Say-on-Pay Dissent Voting and CEO pay on Women and Foreign Directors on the Remuneration Committee

	Model (1) Logit Women appointment	Model (2) Logit Foreign director appointment
Log dissent	-0.0614	-0.0551
	(-1.55)	(-1.47)
Log CEO pay	0.167	0.0796
	(1.61)	(0.76)
Women on board	25.89***	
	(16.97)	
Foreign directors on board		1.058***
		(12.12)
Institutional ownership	0.756**	1.042***
	(2.05)	(2.81)
Board size	-0.0897**	-0.200***
	(-2.42)	(-4.22)
Remuneration committee size	0.680***	0.774***
	(9.26)	(10.19)
Board independence	-1.357*	0.357
	(-1.83)	(0.50)
Remuneration committee independence	1.032*	0.193
	(1.86)	(0.29)
CEO duality	0.154	0.182
	(0.80)	(0.90)
Log total sales	0.0659	0.175***
	(1.02)	(2.59)
Stock return	-0.490**	-0.0175
	(-2.56)	(-0.10)
ROA	-1.107	0.364
	(-1.17)	(0.42)
MBV	0.000561	0.00259
	(0.08)	(0.43)
Leverage	-0.657	0.757
	(-1.36)	(1.64)
Price volatility	-0.00230	0.00844
	(-0.23)	(0.94)
Foreign sales	-0.00488**	0.00587***
	(-2.30)	(2.65)
Year dummies	Yes	Yes
Industry dummies	Yes	Yes
Constant	-7.370***	-8.329***
	(-5.94)	(-6.10)
N	2286	2162
Pseudo R2	0.509	0.447

Note that women appointment is an indicator variable of 1 if the appointed director on remuneration committee is women. Foreign director appointment is an indicator variable of 1 if the appointed director on remuneration committee is foreign. Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Women on board is proportion of women from total board size. Foreign directors on board is proportion of foreign directors from total board size. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.23 Impact of Women and Foreign Directors on the Remuneration Committee on Say-on-Pay Dissent Voting Pre- and Post-Financial Crisis of 2007

	Pre-financial crisis of 2007				Post-financial crisis of 2007			
	Model (1) OLS Log dissent	Model (2) Logit Dissent > 10	Model (3) OLS Log dissent	Model (4) Logit Dissent > 10	Model (3) OLS Log dissent	Model (4) Logit Dissent > 10	Model (7) OLS Log dissent	Model (8) Logit Dissent > 10
Main variables								
Women directors	-0.724***	-0.926			-0.518***	-1.007***		
	(-2.24)	(-1.22)			(-2.36)	(-2.55)		
Foreign directors			0.660***	1.570***			0.363***	0.318
			(2.31)	(3.37)			(2.17)	(1.10)
Control variables								
Log CEO pay	0.464***	0.254	0.437***	0.182	0.614***	0.641***	0.602***	0.619***
	(5.10)	(1.51)	(4.78)	(1.09)	(9.94)	(5.10)	(9.72)	(5.00)
Institutional ownership	-0.272	-0.657	-0.316	-0.670	0.366	0.0875	0.366	0.0622
	(-0.86)	(-1.12)	(-1.03)	(-1.18)	(1.49)	(0.21)	(1.49)	(0.15)
Board size	0.0402	-0.00967	0.0296	-0.0444	-0.0125	-0.0511	-0.0154	-0.0498
	(1.51)	(-0.18)	(1.10)	(-0.79)	(-0.55)	(-1.20)	(-0.67)	(-1.16)
Remuneration committee size	0.0431	-0.122	0.0583	-0.0652	0.0182	0.0948	0.0181	0.0867
	(0.88)	(-0.95)	(1.22)	(-0.52)	(0.45)	(1.28)	(0.45)	(1.19)
Board independence	0.171	1.251	-0.176	0.528	0.934*	1.190	0.724	0.994
	(0.31)	(1.12)	(-0.32)	(0.45)	(2.30)	(1.70)	(1.76)	(1.40)
Remuneration committee independence	-0.728	-1.126	-0.531	-0.733	0.259	0.595	0.296	0.553
	(-1.47)	(-1.19)	(-1.08)	(-0.78)	(0.75)	(0.98)	(0.85)	(0.91)
CEO duality	0.00808	0.238	-0.0368	0.179	0.570***	0.790***	0.591***	0.806***
	(0.05)	(0.81)	(-0.23)	(0.60)	(3.97)	(3.43)	(4.15)	(3.52)
Log total sales	-0.0161	-0.128	-0.0474	-0.181	0.0956*	-0.00192	0.0827	-0.0198
	(-0.30)	(-1.23)	(-0.89)	(-1.73)	(2.21)	(-0.03)	(1.91)	(-0.28)
Stock return	-0.00836	-0.0321	0.00454	-0.00734	-0.178	-0.226	-0.171	-0.212
	(-0.06)	(-0.12)	(0.03)	(-0.03)	(-1.77)	(-1.34)	(-1.71)	(-1.27)
ROA	-1.193	-1.160	-1.165	-1.264	-0.397	-2.249*	-0.405	-2.157*
	(-1.67)	(-0.74)	(-1.62)	(-0.79)	(-0.71)	(-2.52)	(-0.72)	(-2.45)
MBV	0.00444	0.0122	0.00311	0.00931	-0.000786	0.000477	-0.00118	0.000103
	(1.00)	(1.43)	(0.72)	(1.18)	(-0.21)	(0.08)	(-0.33)	(0.02)
Leverage	-0.0723	-0.622	-0.0835	-0.862	0.548	0.327	0.494	0.277

Table 6.23 Continued

	(-0.19)	(-0.84)	(-0.22)	(-1.06)	(1.91)	(0.69)	(1.73)	(0.59)
Price volatility	0.00999	-0.000318	0.00742	-0.00889	0.0181**	0.0346***	0.0207***	0.0388***
	(1.20)	(-0.02)	(0.90)	(-0.55)	(3.04)	(3.57)	(3.53)	(4.16)
Year dummies	No	No	No	No	No	No	No	No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-7.275***	-0.601	-6.824***	0.687	-11.13***	-8.962***	-10.97***	-8.651***
	(-7.42)	(-0.37)	(-6.83)	(0.41)	(-14.21)	(-6.53)	(-13.96)	(-6.29)
N	857	814	857	814	1578	1585	1578	1585
R2/Pseudo R2	0.128	0.036	0.130	0.051	0.146	0.066	0.145	0.063

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Dissent >10% is an indicator of 1 if shareholders' dissent is greater than 10%, 0 otherwise. Women is proportion of women from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.24 Impact of Women on the Remuneration Committee on CEO Pay Pre- and Post- Financial Crisis of 2007

	Pre-financial crisis of 2007				Post-financial crisis of 2007			
	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variable								
Women directors	0.0644	-0.139	-0.0667	-0.215	0.286***	-0.0667	0.609***	-0.106
	(0.48)	(-1.27)	(-0.26)	(-1.09)	(2.81)	(-0.78)	(3.19)	(-0.75)
Control variables								
Institutional ownership	-0.314**	-0.124	-0.333	-0.279	-0.0529	-0.0774	-0.296	-0.256
	(-2.64)	(-1.53)	(-1.41)	(-1.80)	(-0.43)	(-0.81)	(-1.47)	(-1.61)
Board size	0.0733***	0.0480***	0.0229	0.0648**	0.0771***	0.0373***	0.0864***	0.0295*
	(6.20)	(4.74)	(0.79)	(3.24)	(6.62)	(4.17)	(4.77)	(2.21)
Remuneration committee size	0.000263	0.0111	0.0222	-0.0469	0.0256	0.0207	0.0762**	0.00721
	(0.01)	(0.72)	(0.54)	(-1.54)	(1.30)	(1.47)	(2.78)	(0.29)
Board independence	1.293***	0.638***	1.416***	0.963***	0.772***	0.465***	0.873**	0.845***
	(5.71)	(4.03)	(3.37)	(3.51)	(4.37)	(3.36)	(3.16)	(3.51)
Remuneration committee independence	-0.789***	-0.693***	-0.129	-0.901*	-0.418**	-0.300*	-0.539*	-0.508*
	(-3.66)	(-4.16)	(-0.24)	(-2.53)	(-2.67)	(-2.22)	(-2.24)	(-2.15)
CEO duality	-0.190**	-0.0916	-0.134	-0.0615	-0.319***	-0.0562	-0.467**	0.0346
	(-3.20)	(-1.94)	(-1.08)	(-0.66)	(-4.34)	(-0.96)	(-2.78)	(0.34)
Log CEO tenure	0.0408	0.108***	0.0464	0.116***	0.0382	0.0932***	-0.0185	0.0962***
	(1.86)	(4.51)	(1.19)	(3.97)	(1.95)	(5.46)	(-0.68)	(3.58)
Log total sales	0.257***	0.205***	0.398***	0.240***	0.163***	0.130***	0.224***	0.169***
	(12.95)	(13.51)	(8.79)	(8.22)	(9.31)	(9.14)	(7.72)	(7.19)
Stock return	0.208***	0.0795	0.450***	0.223**	0.350***	0.156***	0.499***	0.330***
	(3.43)	(1.80)	(4.20)	(2.85)	(6.30)	(3.40)	(6.40)	(4.25)
ROA	0.399	0.607**	-0.387	0.908*	0.736*	0.470*	1.042*	0.659
	(1.51)	(2.77)	(-0.65)	(2.23)	(2.37)	(2.32)	(2.02)	(1.73)
MBV	0.00223	0.00213*	0.00304	0.00293	0.00132	0.000453	0.00433*	0.000814
	(1.93)	(1.99)	(0.93)	(1.48)	(1.12)	(0.47)	(2.32)	(0.32)
Leverage	-0.0227	0.113	-0.352	0.225	0.166	-0.107	0.402*	-0.299
	(-0.17)	(1.07)	(-1.10)	(0.92)	(1.32)	(-1.09)	(2.13)	(-1.67)
Price volatility	-0.00487	0.000838	-0.0138*	0.00159	-0.0144***	-0.0097***	-0.00628	-0.0119***
	(-1.60)	(0.42)	(-2.06)	(0.39)	(-5.16)	(-4.58)	(-1.54)	(-3.69)
Foreign sales	0.00291***	0.00217***	0.00466**	0.00404***	0.00181***	0.00223***	0.00234*	0.00318***
	(3.94)	(4.40)	(3.11)	(4.52)	(3.56)	(5.89)	(2.48)	(4.39)

Table 6.24 Continued

Year dummies	No	No	No	No	No	No	No	No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.056***	2.982***	0.265	1.905***	4.364***	4.535***	2.200***	3.530***
	(8.22)	(9.46)	(0.32)	(3.60)	(13.56)	(15.74)	(4.23)	(7.29)
N	788	788	693	707	1482	1482	1309	1126
R^2	0.623	0.606	0.445	0.481	0.451	0.368	0.371	0.309

Note that Log CEO pay is sum of CEO total remuneration, which include cash, and equity linked remuneration Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women directors is proportion of women directors from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.25 Impact of Foreign Directors on the Remuneration Committee on CEO Pay Pre- and Post- Financial Crisis of 2007

	Pre-financial crisis of 2007				Post-financial crisis of 2007			
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)	Model (7)	Model (8)
	OLS Log total CEO pay	OLS Log CEO cash pay	OLS Log CEO equity pay	OLS Log CEO bonus pay	OLS Log total CEO pay	OLS Log CEO cash pay	OLS Log CEO equity pay	OLS Log CEO bonus pay
Main variable								
Foreign directors	0.179*	0.141*	0.436**	0.279**	0.0199	0.140**	0.0899	0.437***
	(1.72)	(1.95)	(2.34)	(2.12)	(0.26)	(2.19)	(0.67)	(4.41)
Control variables								
Institutional ownership	-0.314**	-0.138	-0.372	-0.307*	-0.0358	-0.0793	-0.274	-0.271
	(-2.65)	(-1.72)	(-1.56)	(-2.00)	(-0.29)	(-0.82)	(-1.37)	(-1.72)
Board size	0.0698***	0.0461***	0.0156	0.0605**	0.0767***	0.0364***	0.0846***	0.0266*
	(5.87)	(4.56)	(0.55)	(3.06)	(6.61)	(4.06)	(4.65)	(2.00)
Remuneration committee size	0.00482	0.0142	0.0297	-0.0410	0.0273	0.0208	0.0785**	0.00788
	(0.21)	(0.94)	(0.72)	(-1.36)	(1.37)	(1.49)	(2.79)	(0.33)
Board independence	1.236***	0.565***	1.249**	0.823**	0.792***	0.431**	0.897**	0.759**
	(5.46)	(3.59)	(3.04)	(2.96)	(4.45)	(3.09)	(3.22)	(3.14)
Remuneration committee independence	-0.757***	-0.662***	-0.0480	-0.838*	-0.372*	-0.289*	-0.444	-0.474*
	(-3.52)	(-4.06)	(-0.09)	(-2.36)	(-2.38)	(-2.16)	(-1.86)	(-2.06)
CEO duality	-0.194**	-0.102*	-0.149	-0.0767	-0.320***	-0.0498	-0.465**	0.0516
	(-3.27)	(-2.21)	(-1.21)	(-0.82)	(-4.35)	(-0.86)	(-2.72)	(0.51)
Log CEO tenure	0.0427	0.108***	0.0477	0.115***	0.0400*	0.0938***	-0.0155	0.101***
	(1.96)	(4.54)	(1.27)	(3.92)	(2.05)	(5.53)	(-0.57)	(3.77)
Log total sales	0.252***	0.196***	0.380***	0.224***	0.167***	0.125***	0.232***	0.155***
	(12.53)	(13.61)	(8.16)	(7.98)	(9.37)	(8.59)	(8.03)	(6.61)
Stock return	0.207***	0.0824	0.450***	0.229**	0.347***	0.159***	0.493***	0.334***
	(3.41)	(1.86)	(4.21)	(2.95)	(6.25)	(3.47)	(6.42)	(4.35)
ROA	0.370	0.604**	-0.408	0.932*	0.731*	0.456*	0.983	0.629
	(1.42)	(2.86)	(-0.69)	(2.36)	(2.34)	(2.26)	(1.91)	(1.67)
MBV	0.00185	0.00181	0.00209	0.00231	0.00139	0.000360	0.00459*	0.000713
	(1.70)	(1.73)	(0.66)	(1.22)	(1.18)	(0.37)	(2.46)	(0.28)
Leverage	-0.0429	0.118	-0.392	0.228	0.172	-0.123	0.406*	-0.333
	(-0.32)	(1.14)	(-1.27)	(0.96)	(1.36)	(-1.24)	(2.15)	(-1.87)
Price volatility	-0.00525	0.000353	-0.0146*	0.000733	-0.0148***	-0.0092***	-0.00714	-0.00995**
	(-1.74)	(0.18)	(-2.20)	(0.18)	(-5.24)	(-4.28)	(-1.76)	(-3.08)
Foreign sales	0.00249***	0.00195***	0.00385*	0.00358***	0.00173***	0.00197***	0.00204*	0.00245***
	(3.40)	(3.92)	(2.53)	(3.90)	(3.36)	(5.14)	(2.03)	(3.39)

Table 6.25 Continued

Year dummies	No	No	No	No	No	No	No	No
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.099***	3.078***	0.479	2.050***	4.298***	4.608***	2.088***	3.668***
	(8.34)	(10.18)	(0.57)	(3.94)	(13.22)	(15.81)	(4.00)	(7.69)
N	788	788	693	707	1482	1482	1309	1126
R^2	0.625	0.606	0.449	0.483	0.448	0.370	0.366	0.319

Note that Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO cash is the natural logarithm of CEO's salary, bonus and other annual cash compensation. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. Women directors is proportion of women directors from total remuneration committee size. Foreign directors is proportion of foreign directors from total remuneration committee size. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.

***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.26 Impact of British and non-British Women on the Remuneration Committee on Say-on-Pay Dissent Voting

	Model (1) OLS Log dissent	Model (2) Logit Dissent > 10	Model (3) OLS Log dissent	Model (4) Logit Dissent > 10
Main variables				
British women	-0.718***	-1.608***		
	(-3.72)	(-4.18)		
Non-British women			0.164	1.010
			(0.56)	(1.91)*
Control variables				
Log CEO pay	0.590***	0.527***	0.583***	0.511***
	(11.44)	(5.42)	(11.37)	(5.32)
Institutional ownership	0.161	-0.0283	0.105	-0.144
	(0.84)	(-0.09)	(0.55)	(-0.43)
Board size	0.00198	-0.0417	0.00688	-0.0360
	(0.11)	(-1.26)	(0.40)	(-1.08)
Remuneration committee size	0.00888	0.00466	0.00763	-0.00663
	(0.29)	(0.07)	(0.25)	(-0.11)
Board independence	0.703**	1.107*	0.711**	1.110*
	(2.13)	(1.92)	(2.16)	(1.92)
Remuneration committee independence	-0.126	0.111	-0.174	-0.0524
	(-0.44)	(0.22)	(-0.62)	(-0.10)
CEO duality	0.286***	0.537***	0.279***	0.532***
	(2.66)	(3.02)	(2.62)	(3.03)
Log total sales	0.0379	-0.0585	0.0269	-0.0839
	(1.13)	(-1.00)	(0.81)	(-1.44)
Stock return	-0.150	-0.127	-0.147	-0.116
	(-1.57)	(-0.77)	(-1.55)	(-0.72)
ROA	-0.738*	-1.727**	-0.646	-1.623**
	(-1.68)	(-2.39)	(-1.48)	(-2.33)
MBV	0.000595	0.00522	0.000723	0.00558
	(0.21)	(1.12)	(0.26)	(1.19)
Leverage	0.387*	0.0294	0.414*	0.0539
	(1.73)	(0.08)	(1.86)	(0.14)
Price volatility	0.0143***	0.0200**	0.0144***	0.0212***
	(2.97)	(2.46)	(3.04)	(2.66)
Year dummies	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes
Constant	-8.951***	-6.183***	-8.835***	-6.029***
	(-14.12)	(-5.68)	(-13.97)	(-5.58)
N	2435	2449	2435	2449
R2/Pseudo R2	0.156	0.065	0.154	0.059

Note that Log dissent is total number of against votes divided by total number vote cast on remuneration report (transferred using logit dissent = ln(dissent/(1-dissent)). Dissent >10% is an indicator of 1 if shareholders' dissent is greater than 10%, 0 otherwise. British women is proportion of British women from total remuneration committee size. Non-British women is proportion of non-British women from total remuneration committee size. Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

Table 6.27 Impact of British and non-British Women on the Remuneration Committee on CEO Pay

	Model (1) OLS Log total CEO pay	Model (2) OLS Log CEO cash pay	Model (3) OLS Log CEO equity pay	Model (4) OLS Log CEO bonus pay	Model (5) OLS Log total CEO pay	Model (6) OLS Log CEO cash pay	Model (7) OLS Log CEO equity pay	Model (8) OLS Log CEO bonus pay
Main variables								
British women	0.0949	-0.130*	0.320**	-0.406***				
	(1.16)	(-1.90)	(2.19)	(-3.27)				
Non-British women					0.183	0.0668	0.104	0.444**
					(1.17)	(0.55)	(0.37)	(2.43)
Control variables								
Institutional ownership	-0.0516	-0.0195	-0.167	-0.137	-0.0493	-0.0260	-0.158	-0.152
	(-0.58)	(-0.28)	(-1.08)	(-1.19)	(-0.55)	(-0.38)	(-1.02)	(-1.31)
Board size	0.0749***	0.0442***	0.0644***	0.0510***	0.0746***	0.0447***	0.0632***	0.0528***
	(8.46)	(6.40)	(4.01)	(4.31)	(8.42)	(6.46)	(3.92)	(4.45)
Remuneration committee size	0.00123	0.00634	0.0452	-0.0253	-0.000202	0.00656	0.0426*	-0.0262
	(0.08)	(0.60)	(1.91)	(-1.32)	(-0.01)	(0.61)	(1.80)	(-1.37)
Board independence	0.953***	0.501***	1.083***	0.785***	0.947***	0.488***	1.091***	0.732***
	(6.75)	(4.81)	(4.66)	(4.29)	(6.81)	(4.70)	(4.74)	(4.00)
Remuneration committee independence	-0.671***	-0.442***	-0.474*	-0.729***	-0.653***	-0.455***	-0.430*	-0.753***
	(-5.44)	(-4.13)	(-1.94)	(-3.53)	(-5.38)	(-4.26)	(-1.78)	(-3.68)
CEO duality	-0.305***	-0.0498	-0.383***	-0.0665	-0.303***	-0.0516	-0.377***	-0.0710
	(-6.08)	(-1.35)	(-3.44)	(-0.97)	(-6.03)	(-1.40)	(-3.37)	(-1.03)
Log CEO tenure	0.0499***	0.110***	0.00646	0.102***	0.0499***	0.109***	0.00819	0.0986***
	(3.34)	(7.70)	(0.28)	(5.06)	(3.33)	(7.64)	(0.36)	(4.86)
Log total sales	0.227***	0.172***	0.316***	0.218***	0.228***	0.169***	0.321***	0.208***
	(17.66)	(16.14)	(13.30)	(11.75)	(17.65)	(16.05)	(13.32)	(11.31)
Stock return	0.307***	0.127***	0.542***	0.297***	0.307***	0.129***	0.540***	0.302***
	(7.32)	(3.62)	(8.46)	(5.18)	(7.32)	(3.66)	(8.46)	(5.31)
ROA	0.900***	0.607***	0.837*	0.908**	0.866***	0.621***	0.756**	0.925***
	(4.31)	(3.95)	(2.24)	(3.11)	(4.16)	(4.07)	(2.04)	(3.21)
MBV	0.00152*	0.00109	0.00282*	0.00193	0.00151*	0.00108	0.00283*	0.00192

Table 6.27 Continued

	0.212**	0.0586	0.255	0.00617	0.196**	0.0669	0.221	0.0308
Leverage	(2.31)	(0.80)	(1.52)	(0.04)	(2.14)	(0.92)	(1.34)	(0.21)
	-0.00846***	-0.00444***	-0.00964**	-0.00476*	-0.00842***	-0.00436***	-0.00979**	-0.00454*
Price volatility	(-4.27)	(-2.94)	(-2.56)	(-1.83)	(-4.25)	(-2.88)	(-2.59)	(-1.76)
	0.00182***	0.00216***	0.00262***	0.00278***	0.00168***	0.00223***	0.00236***	0.00292***
Foreign sales	(4.32)	(6.99)	(3.21)	(4.86)	(4.00)	(7.23)	(2.93)	(5.05)
	0.212**	0.0586	0.255	0.00617	0.196**	0.0669	0.221	0.0308
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.941***	3.897***	1.525***	2.995***	3.941***	3.932***	1.471***	3.022***
	(15.80)	(18.41)	(2.99)	(7.94)	(15.58)	(18.65)	(2.84)	(8.08)
N	2150	2150	1920	1742	2150	2150	1920	1742
R^2	0.548	0.484	0.422	0.406	0.548	0.483	0.421	0.404

Note that Log CEO pay is sum of the natural logarithm of CEO total remuneration, which include cash, and equity linked remuneration. Log CEO cash is the natural logarithm of CEO's salary, bonus and other annual cash compensation. Log CEO equity is the natural logarithm of CEO's equity linked remuneration (restricted stock granted and options granted). Log CEO bonus pay is the natural logarithm of CEO's bonus remuneration. British women is proportion of British women directors from total remuneration committee size. Non-British women is proportion of non-British women from total remuneration committee size. Institutional ownership is proportion of ownership hold by institutional investors holding more than 3% of firm's equity. Board size is total number of directors in the board. Board independence is proportion of independent nonexecutive directors in the board. Remuneration committee size is total number of directors in the remuneration committee. Remuneration committee independence is proportion of independent nonexecutive directors in remuneration committee. CEO duality is an indicator of 1 if CEO combine the posts of CEO and chair, 0 otherwise. Log CEO tenure is the natural logarithm of number of years a CEO serve on board. Log sales is natural log of firms' total sales. ROA is firms' income before extraordinary items divided by total assets. Stock returns is stock price appreciation plus dividends. MBV is average equity market value divided by total book value of equity. Leverage is the total debt to total assets. Price volatility is a stock's average annual price movement to a high and low from a mean price for each year. Foreign sales is percentage of total sales that come from a foreign country's operation. Robust standard errors in parentheses.
***, **, and * denote significance at 1%, 5% and 10%, respectively.

6.7 Conclusion

This chapter presented the research findings and discussed the empirical study of the relationship between the presence of women and foreign directors on remuneration committees regarding say-on-pay dissent voting and CEO pay. However, before analysing the empirical study, the chapter started with a presentation of the descriptive statistics and figures related to the evolution of UK boards' characteristics, including board size, board composition, CEO duality and board diversity. The analysis of the descriptive statistics and figures regarding the evolution of UK corporate boards revealed important observations.

First, the board size of UK non-financial boards was somewhat stable over the study but with a noticeable drop during the 2007 financial crisis. Overall, UK boards have an average of 9.06 board of directors. Second, the number of executive directors has seen a significant drop from 42% in 2003 to only 28.6% in 2015, whereas the number of non-executive independent directors has increased dramatically over the period of 2003-2015 (from 48% in 2003 to 62% by 2015). This is in line with the UK corporate governance codes that recommend most board of directors should be non-executive independent directors. Additionally, CEO duality has also seen a dramatic decrease from 21% in 2003 to almost 7% in 2015. This also reflects the UK corporate governance's approach to separate the roles of chairman and CEO. Another important observation regarding the evolution of UK boards is that the number of women on corporate boards sharply increased over the study period, particularly after the publication of the Davies Report (2011). Moreover, remuneration committee size and remuneration committee independence were somewhat stable over the period of 2003-2015; however proportion of women and foreign directors on remuneration committees continued to increase overtime and increased more dramatically after the financial crisis of 2007.

Furthermore, this chapter discussed the descriptive statistics and trends of CEO remuneration and say-on-pay for the FTSE 350 non-financial firms from 2003 to 2015. Despite public and media critics, CEO remuneration has continued to climb throughout the study period, increasing from about £1.8 million in 2003 to £2.9 million in 2015 (almost a 38% increase). However, say-on-pay dissent voting was fairly stable from 2003 to 2015 (an average of 6%), except for the period after the financial crisis, when it rose above the 6% average (climbed to 7.32% during the period of 2009-2011).

The results from the relationship between women and foreign directors on remuneration committees reveal that firms with more women directors on their remuneration committees have a significant negative relationship with say-on-pay dissent voting, implying that women directors help in aligning shareholders' interests with those of the management. However, firms with more foreign directors on their remuneration committees are more likely to get higher shareholder dissent voting on their annual remuneration reports. This suggests that shareholders may perceive foreign directors as ineffective monitors. The impact of women and foreign directors on remuneration committees on say-on-pay has been estimated using the OLS with log-transferred dependent variables, and it was also estimated using the logit model. Furthermore, the relationship between women and foreign directors on remuneration committees and say-on-pay is estimated using propensity score matching to control for the possibility of causality and self-selection bias. Regression results show that the previous findings remain unchanged.

The second empirical study of whether the presence of women and foreign directors affects CEO pay shows that firms with more women directors on their remuneration committees prefer non-cash remuneration in forms of equity-based remuneration to compensate their CEOs. Furthermore, the increased presence of women on remuneration committees leads to less CEO bonus remuneration. However, firms with an increased presence of foreign

directors on their remuneration committees tend to have higher CEO remuneration, including direct cash remuneration and equity-based remuneration. The next chapter addresses the study's conclusion and the empirical and policy implications.

CHAPTER VII: CONCLUSIONS AND IMPLICATIONS

7.1 Introduction

The UK has witnessed many corporate governance reforms since the publication of the Cadbury Report (1992). Some of these reforms targeted board independence, institutional investors' engagement, directors' remuneration and board diversity. This study highlights the evolution of the board of directors in the UK's FTSE 350 firms over the period 2003-2015. Furthermore, it examines whether the presence of women and foreign directors on remuneration committees is related to the say-on-pay dissent voting and CEO remuneration. To the author's best knowledge, none of the previous studies on say-on-pay and board diversity have investigated the relationship between women and foreign directors on remuneration committees and say-on-pay dissent voting. Additionally, no attempt has been made in the UK to address whether the presence of women and foreign directors on remuneration committees influences CEO pay. Therefore, this chapter aims, first, to present a summary of the research findings; second, to discuss the empirical and policy implications of the research; and third, to report the limitations and potential opportunities for future research.

The chapter is structured as follows: Section 7.2 presents a summary of the key research findings; Sections 7.3 and 7.4 discuss the empirical and policy implications of the current study, respectively; Section 7.5 reports the study's limitations and future research opportunities; and Section 7.6 concludes the chapter.

7.2 Key Research Findings

This section reports the study's key research findings. The first sub-section discusses corporate governance's descriptive statistics regarding say-on-pay voting and CEO pay in the UK context, and the second sub-section presents the empirical study's results regarding the

relationship between the presence of women and foreign directors on remuneration committees and say-on-pay dissent voting and CEO remuneration.

7.2.1 Summary of the evolution of UK corporate governance, say-on-pay voting and CEO pay

This study's first objective is to address the evolution of corporate governance, say-on-pay voting and CEO remuneration for FTSE 350 non-financial firms over the period 2003-2015. Board size across FTSE 350 non-financial firms dropped over the study period, from 9.33 directors in 2003 to about 9.05 directors in 2015. The decrease in board size was more noticeable after the financial crisis, particularly the period between 2007 and 2011. The proportion of executive directors across all FTSE 350 non-financial firms steadily decreased from 2003-2015, from 42% in 2003 to 28.6% in 2015, whereas the percentage of non-executive independent directors consistently increased over the same time, from about 48% in 2003 to approximately 62% in 2015. Additionally, the proportion of non-executive non-independent directors remained fairly constant over the study period (9.51% in 2003 and 9.48% in 2015). CEO duality among FTSE 350 non-financial companies witnessed a dramatic drop over the 2003-2015 period, from 21.3% in 2003 to 7.08% in 2015. Women directors' representation on FTSE 350 non-financial firms saw a sharp increase over the time of this study, from only 5% to more than 20% in 2015. The increase of women directors was more remarkable after the financial crisis and the publication of the Davies Report (2011). The proportion of foreign directors on UK FTSE 350 non-financial firms saw a remarkable increase over the study period, from about 19% in 2003 to nearly 27% in 2015. Say-on-pay dissent voting across all FTSE 350 non-financial companies remained low over the study period, showing an average of 6%. The percentage of say-on-pay dissent voting, however, increased dramatically after the financial crisis, reaching the peak point of 7.1% in 2011. CEO pay across all FTSE 350 non-financial firms continued to increase over the 2003-2015

period, from about £1.82 million in 2003 to £3.18 and £2.9 million in 2013 and 2015, respectively. Also, over the time of the study, all FTSE 350 non-financial firms tended to prefer equity-based remuneration than cash remuneration to pay their CEOs.

7.2.2 Summary of the study's key empirical findings

This study's second objective is to examine whether firms with more women and foreign directors on their remuneration committees have less or more say-on-pay dissent voting and whether the same firms also have less or more CEO pay (see table 7.1 for the summary of the results). In addition, this study has investigated the critical mass theory within the context of whether firms with only one woman or one foreign director on their remuneration committees have the same influence on say-on-pay dissent voting as firms with two or more women or foreign directors on their remuneration committees. Furthermore, this research has estimated the impact of women and foreign directors on remuneration committees on say-on-pay dissent voting using propensity score matching to control for endogeneity problems. Also, this study uses two-system GMM to estimate the relationship between CEO pay and the presence of women and foreign directors on remuneration committees. Women directors on remuneration committees are found to negatively impact shareholder dissent voting via say-on-pay. This result remains unchanged even after using propensity score matching to control for endogeneity. Two or more women directors on firms' remuneration committees tend to have a more significant negative impact on say-on-pay dissent voting than firms with only one woman on their remuneration committees. The sub-period analysis reveals that the negative impact of women on remuneration committees regarding say-on-pay dissent voting was more remarkable and significant after the 2007 financial crisis. Firms with more women on their remuneration committees are less likely to distribute cash remuneration in terms of bonuses to their CEOs. However, the same firms are more likely to rely on equity-based remuneration to pay their CEOs.

Table 7.1 Summary of The Results

Research Question	Theory Used	Hypothesis	Expected Sign	Result	Result After Endogeneity Estimation
Does a higher proportion of female directors on firms' remuneration committees have an impact on shareholders' dissent via say-on-pay voting?	Agency theory	H 1. The greater the presence of women on the remuneration committee, the lower the proportion of shareholder dissent votes via say-on-pay.	(-)	**Support H1**: negative relationship between women on remuneration committees and shareholders' dissent voting.	Remain unchanged
Does a higher proportion of female directors on firms' remuneration committees have an impact on CEO remuneration?	Agency theory	H2. The greater the presence of women on the remuneration committee, the lower the CEO pay.	(-)	**Partially support H2**: negative relationship between women on remuneration committees and CEO cash and bonus remuneration, however they have positive impact on CEO equity remuneration.	Remain unchanged
Do firms with only two or more women on their remuneration committees have an impact on shareholder dissent votes via say-on-pay?	Critical mass theory	H3. Firms with two or more women on their remuneration committees have a negative impact on shareholder dissent votes via say-on-pay.	(-)	**Support H3**: firms with only two or more women on their remuneration committees have a negative impact on	Remain unchanged
Do firms with only two or more women on their remuneration committees have an impact on CEO Pay?	Critical mass theory	H4. Firms with two or more women on their remuneration committees have a negative impact on CEO pay.	(-)	**Partially support H4**: firms with only two or more women on their remuneration committees have a negative impact on CEO cash and bonus remuneration.	Remain unchanged

Table 7.1 Continued

Does a higher proportion of foreign directors on firms' remuneration committees have an impact on shareholders' dissent via say-on-pay voting?	Agency theory	H5. The greater the presence of foreign directors on UK remuneration committees, the higher the proportion of shareholder dissent votes via say-on-pay.	(+)	**Support H5**: positive relationship between presence of foreign directors on remuneration committees and shareholders' dissent voting.	Remain unchanged
Does a higher proportion of foreign directors on firms' remuneration committees have an impact on CEO remuneration?	Agency theory	H6. The greater the presence of foreign directors on UK remuneration committees, the higher the CEO pay.	(+)	**Support H6**: positive relationship between presence of foreign directors on UK remuneration committees and CEO pay (cash, bonus and equity remunerations)	Remain unchanged
Do firms with only two or more foreign directors on their remuneration committees have an impact on shareholder dissent votes via say-on-pay?	Critical mass theory	H7. Firms with two or more foreign directors on their remuneration committees are associated with higher shareholder dissent votes via say-on-pay.	(+)	**Support H7**: firms with only two or more foreign directors on their remuneration committees have a positive impact on shareholders' dissent voting.	Remain unchanged
Do firms with only two or more foreign directors on their remuneration committees have an impact on CEO Pay?	Critical mass theory	H8. Firms with two or more foreign directors on their remuneration committees are associated with higher CEO pay.	(+)	**Support H8**: firms with only two or more foreign directors on their remuneration committees have a positive impact on CEO pay.	Remain unchanged

These results remain unchanged after using propensity score matching and two-system GMM. Foreign directors on UK remuneration committees are found to have a significant positive relationship with shareholder dissent voting via say-on-pay. This result is also robust when propensity score matching estimation is used. Firms with two or more foreign directors on their remuneration committees are more likely to have a significant positive effect on say-on-pay dissent voting than firms with only one foreign director on their remuneration committees. The sub-period analysis reports that the positive impact of foreign directors on remuneration committees on say-on-pay dissent voting was more significant before the 2007 financial crisis. Firms with more foreign directors on their remuneration committees tend to have more CEO remuneration (including cash remuneration and equity-based remuneration). These findings remain robust even after using propensity score matching and two-system GMM.

7.3 Theoretical and Academic Implications

Previous literature has addressed the impact of some board characteristics (such as board size, board independence and CEO duality) and say-on-pay dissent voting (e.g. Conyon, 2016). However, as noted earlier, none of prior studies on say-on-pay and board diversity examined the association between women and foreign directors on remuneration committees and say-on-pay dissent voting. Furthermore, none of previous UK studies have investigated the association between CEO remuneration and the presence of women and foreign directors on remuneration committees. Bugeja et al. (2015) found that US firms with more women on their remuneration committees have less CEO pay, and Masulis et al. (2012) found that US firms with more foreign directors on their remuneration committees are more likely to have greater CEO remuneration. This study's results provide empirical evidence that the gender diversity of directors on remuneration committees plays a significant role in determining say-on-pay dissent voting and CEO remuneration. This research also provides empirical support

for prior studies that suggested women directors are more effective monitors (e.g. Adams and Ferreira, 2004 and 2009; Carter et al., 2003). In addition, this study complements the prior study by Bugeja et al. (2015), finding that UK firms with more women on their remuneration committees have less cash remuneration. For the relationship between the presence of foreign directors on UK remuneration committees, this study provides empirical support for prior studies that found foreign directors are less effective monitors and lead to higher CEO remuneration (Masulis et al., 2012). Furthermore, this study provides empirical support to the critical mass studies that found minorities may have no impact on group decision making, as they may be marginalised or seen as tokens (e.g. Kanter, 1977; Torchia et al., 2011). The present study found that only in firms with two or more women and foreign directors on their remuneration committees do women and foreign directors have negative and positive impacts on say-on-pay dissent voting, respectively.

7.4 Practitioner and Policy Implications

In addition to the theoretical and academic implications, this study also provide different practitioner and policy implications; This study has practical implications in that it shows the recent efforts to have more women on UK boards, such as the Davies Reports (2011, 2012, 2013, 2014 and 2015), have been useful and effective. In addition, this study supports the recent recommendations by Hampton-Alexander (2016) for more representation of women on firms' executive committees and board sub-committees, such as remuneration and nomination committees. Furthermore, this study's results suggest that caution is needed when proposing an increase in foreign directors on board sub-committees, as their insufficient oversight can significantly exacerbate agency conflicts rather than resolve them, for example, by leading to higher CEO remuneration and the consequent increase in shareholders' dissent on directors' remuneration reports. To enhance shareholders' engagement on their investee firms and to limit the increasing CEO remuneration, this research supports the BEIS (2016),

which recommends that shareholders should be given a binding vote on directors' remuneration reports, should establish a shareholder committee or should appoint individual directors to represent shareholder interests on investee boards. To mitigate the increasing level of executive remuneration, this study also supports the BEIS (2016) that states there is a need to disclose executive directors' pay-out ratio.

7.5 Limitations of the Study and Future Research

This study may suffers from some limitations but at the same time these limitations may provide potential future research. First, this study relies on a quantitative research methodology and uses secondary data. Although this study covered most of the characteristics related to gender diversity, nationality diversity, say-on-pay and CEO remuneration, this methodology and this type of data cannot capture and measure all relevant aspects related to these characteristics. Therefore, future research can use an alternative methodology, such as a qualitative approach, for instance, interviewing some of the major shareholders and asking them what factors influence their voting behaviour on directors' remuneration reports and whether they are happy to see more or fewer women or foreign directors on their investee firms' remuneration committees.

Second, this study uses aggregated shareholders' voting data instead of individual shareholders' voting data due to the lack of data availability. Investigating shareholder heterogeneity may explain differences in voting decisions, for example, the differences in voting decisions between pension funds and hedge funds. Therefore, future studies could examine whether the relationship between say-on-pay dissent voting and women and foreign directors on remuneration committees will change depending on the type of investor. Furthermore, this study is limited to the UK. However, other countries may have different corporate governance characteristics; therefore, it is important to understand the relationship

between the presence of women and foreign directors on remuneration committees and how the effects of shareholder dissent via say-on-pay voting and CEO pay impacts other countries. This study has examined the determinants of say-on-pay dissent voting when women and foreign directors are present on remuneration committees. Future studies could also investigate the response of women and foreign directors on remuneration committees following high shareholders' dissent voting and whether their response leads to changes in CEO remuneration. Although this study has included several control variables for the relationship between women and foreign directors and say-on-pay and CEO pay, this study did not control for the remuneration committees' number of meetings and the meetings' attendance due to the unavailability of these data for the entire study period. Controlling for meeting attendance and meeting frequency may assess the monitoring function of women and foreign directors on remuneration committees and its impact on say-on-pay and CEO pay.

The gender pay gap is often included in discussions about gender equality. This research therefore recommend future research to investigate whether the gender pay gap can influence why women may be more likely than men to make a say-on-voting. Future studies could conduct cross-sectional analysis that decomposes firms into groups with high and low CEO remuneration. Future research might also consider examining different remuneration characteristics as shareholders may not be concerned about the level of total pay but may be concerned about the composition or the form of payment (e.g., the proportion of stock-based remuneration and the pay gap between the CEO and other executives).

Finally, this study uses two main theories (agency theory and critical mass theory) to address relationship between presence of women and foreign directors on remuneration committees and say-on-pay voting and CEO pay. Future studies could also investigate the relationship between presence of women and foreign directors on remuneration committees and say-on-pay voting and CEO pay using social related theories. For example, Boulouta and Pitelis

(2014) have used social role theory and found that board gender diversity affects corporate social performance. This might also explain why women directors are more caring about fair remuneration than male directors and therefore, shareholders may prefer to see more women directors on remuneration committees.

7.6 Conclusion

This chapter reported the research's conclusion and implications. After a brief introduction, this chapter discussed the key research findings in regards to the results related to the time series descriptive statistics analysis and the results related to the empirical study. Second, this chapter presented the theoretical and academic implications of this study. In addition, this chapter discussed the study's practitioner and policy implications. Finally, this chapter reported the study's potential limitations and also suggested some future research ideas.

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